Afrikaans

Wiskunde

Mathematics

PILOT

1

Kwartaal 3 | Term 3



Onderwyser | Teacher: .....

Bala Wande
Calculating with Confidence

1

Kwartaal 3 ⋮ Term 3

Wiskunde
Mathematics

Onderwysersgids
Teacher's Guide

Afrikaans ⋮ English

Die ontwikkeling van hierdie werkboek is met die medewerking van die *Bala Wande–Magic Classroom Collective*-span moontlik gemaak, in oorleg met 'n verwysingspan wat saamgestel is uit individue van etlike universiteite, wiskunde-NRO's en die Departement van Basiese Onderwys. Hierdie materiaal is gebaseer op die werk van die DBO-werkboeke en bestaande aanpassings van lesplanne (GPLMS, Jika iMfundo, NECT en TMU). Die Bala Wande-kratte met konkrete items is in oorleg met Jade Education ontwerp. Dié kratte voorsien hoëgehalte-materiaal wat 'n integrerende deel van die onderrig-en-leerprogram uitmaak.

The development of this workbook was carried out by the collaborative *Bala Wande–Magic Classroom Collective team* in consultation with a reference team made up of individuals from several universities, mathematics NGOs and the Department of Basic Education. These materials draw on the DBE workbooks and existing iterations of lesson plans (GPLMS, Jika iMfundo, NECT and TMU). The Bala Wande manipulative boxes were designed in consultation with Jade Education. The boxes provide high quality materials which are an integral part of the teaching and learning programme.

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Die Bala Wande-wiskundeprogram vir die Grondslagfase

Funda Wande is 'n organisasie sonder winsoogmerk wat ten doel het om te verseker dat alle leerders in Suid-Afrika teen 10-jarige ouderdom met begrip in hul huistaal kan lees. Bala Wande is die wiskundeprogram wat hiermee gepaard gaan, met die oogmerk om te verseker dat daar in die vroeë laerskooljare 'n effektiewe grondslag in wiskunde by alle leerders in Suid-Afrika gelê word.

Die Bala Wande-wiskundeprogram is 'n dag-tot-dag-handleiding oor wiskundeonderrig wat die leerders in staat stel om hul begrip van wiskunde uit te bou en berekeninge met selfvertroue te doen. Dit is spesifiek vir die Suid-Afrikaanse kurrikulum ontwikkel en voldoen aan die KABV. Die inhoud, tydstoekenning en assessering vir leer is alles op die KABV gebaseer.

Die Bala Wande-kursusmateriaal omvat 'n Onderwysersgids, 'n Leerdersboek en konkrete items vir beide onderwyser en leerders (sien bladsy 6 & 7).

1. Welkom by Graad 1!



Ons doel is dat die leerders goeie gewoontes moet aankweek terwyl hulle wiskunde doen. Hulle moet dus daarop gewys word dat hulle aandagtig moet kyk na dit wat hulle veronderstel is om te doen. Wanneer jy elke dag die onafhanklike klaswerk bekendstel, moet jy die leerders help om hierdie gewoontes aan te leer.

Gewoonte 1: Ons kyk self. Wat sien ek? Wat moet ek doen?
Gewoonte 2: Ons teken prente. Wat kan ek teken wat my sal help om die probleem op te los?
Gewoonte 3: Ons gesels hardop oor wiskunde.

Dit is hierdie jaar ons grootste oogmerk om die kinders aan te moedig om hardop oor wiskunde te gesels. Jy moet elke dag daarop ingestel wees om soveel moontlik leerders by die aktiewe heleklasbesprekings te betrek. Loop in die klas rond en fasiliteer die onafhanklike klaswerk – vra deurtastende vrae om uit te vind of die leerders dit waarmee hulle besig is, verstaan. Luister na die vrae wat hulle vra en reageer so duidelik moontlik op dit wat hulle gevra het.

Wees op die uitkyk na leerders wat sukkel met dinge soos 'n basiese getalbegrip. As daar kinders is wat oënskynlik nie basiese getalle van 0 tot 10 verstaan nie, gee ekstra aktiwiteite aan hulle om met getalle in hierdie getalgebied te werk. Hou aan om vir hulle vrae oor getalle en getalkombinasies in hierdie getalgebied te vra totdat jy sien dat hulle met selfvertroue met die getalle 0 tot 10 kan werk.

Die Bala Wande-materiaal is alles tweetalig. Dit is om die ontwikkeling van wiskundetaal in sowel Afrikaans as Engels te ondersteun. Dit bied ondersteuning vir jou om op 'n natuurlike wyse van een taal na 'n ander oor te skakel wanneer daar oor wiskunde gesels word. Die Bala Wande-woordeboek sal jou help om meer as een taal te gebruik om wiskunde terme te verduidelik, indien nodig.

Talle Suid-Afrikaanse wiskunde-onderwysers maak reeds van kode- of taalwisseling gebruik om hul leerders te help om wiskundebegrippe en -terme te verstaan. Taalwisseling stel die onderwysers en leerders in staat om al hul taalvaardighede in te span om te leer in plaas daarvan om tot slegs een taal beperk te wees. Hierdie praktyk word internasionaal beoefen en staan ook as 'translanguaging bekend.'

In die Grondslagfase gaan die onderrig van wiskunde en die onderrig van taal hand aan hand. Die Bala Wande-program is sodanig beplan dat dit jou met hierdie onderrig bystaan.

The Bala Wande Foundation Phase mathematics programme

Funda Wande is a not-for-profit organisation that aims to ensure that all learners in South Africa can read for meaning and calculate with confidence in their home language by the age of 10. Bala Wande is the accompanying mathematics programme that aims to ensure that all learners in South Africa get an effective grounding in mathematics in the early primary school years.

The Bala Wande mathematics programme provides a day-by-day guide on how to teach mathematics so that learners will develop their mathematical understanding and begin to calculate with confidence. The programme was developed specifically for the South African curriculum and is CAPS-compliant. The content, time allocation and assessment for learning all are based on the CAPS.

The Bala Wande course materials comprise a Teacher's Guide, a Learner's Book and manipulatives for both teacher and learners (see pages 6 & 7).

1. Welcome to Grade 1!



We would like learners to establish good habits while doing maths right from the start. Talk to them about looking carefully at what they are supposed to do. Each day when you introduce the independent classwork, help learners develop these habits:

Habit 1: We look for ourselves. What do I see? What must I do?
Habit 2: We draw pictures. What can I draw to help me solve the problem?
Habit 3: We talk out loud about maths.

Our biggest goal this year is to encourage learners to start to talk out loud about maths. Aim to involve as many learners as possible in the active whole class discussions. Walk around and facilitate the independent classwork – ask probing questions to find out if learners understand what they are doing. Listen to the questions they ask and respond as clearly as possible.

Keep your eye out for learners who are struggling with things such as basic number concept. If there are learners who do not seem to understand basic numbers from 0 to 10, give them extra activities to work with numbers in this range. Keep asking them questions about numbers and number bonds in this range until you see that they are able to work confidently with the numbers 0 to 10.

The Bala Wande material is all bilingual. It supports the development of mathematics language in both Afrikaans and English by moving naturally between languages when speaking about mathematics. The Bala Wande dictionary will help teachers use more than one language to explain mathematical words if necessary.

Many South African mathematics teachers already code-switch to help their learners understand mathematical concepts and terms. Code-switching allows teachers and learners to draw on all of their language skills to learn, rather than to be limited by one language only. This practice is used internationally and is also called 'translanguaging'.

In the Foundation Phase, teaching mathematics and teaching language go together. The Bala Wande programme has been planned to support you in this teaching.

2. Bala Wande-leerder-en-onderwyser-ondersteuningsmateriaal

Bala Wande-onderwysersgids

- 'n oorsig van die begrippe wat elke week onderrig moet word
- die hoofrekene wat vir elke dag beplan is (dag 1–4)
- kernkonsep-onderrigaktiwiteite wat deur plakkate en konkrete items uit die boks ondersteun word (dag 1–4)
- kopieë van bladsye uit die Bala Wande-leerderaktiwiteitsboek vir die dag (wat in volgorde in die Onderwysersgids opgeneem is), met oplossings en notas aan onderwysers
- assessering vir leer (dag 5 vir week 2–8)
- vaslegging (dag 5 vir week 1–10)



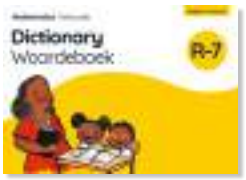
Bala Wande-leerdersboek

- daaglikse aktiwiteite wat met die lesaktiwiteite ooreenstem
- daaglikse aktiwiteite waaraan die leerders onafhanklik of in groepe kan werk
- speletjies wat met die lesaktiwiteite verband hou



Tweetalige woordeboek

- 'n tweetalige woordeboek wat wiskunde terme met verduidelikings en voorbeelde vir die Grondslagfase bevat



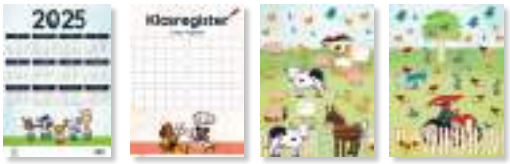
Video's

- lesvideo's waarin klaskameropnames van onderwysers, wat van die beplande lesse implementeer, vertoon word
- opleidingsvideo's voorsien klaskameropnames, tesame met animasies, wat goeie metodologieë vir die onderrig van wiskunde in die Grondslagfase beklemtoon en voorhou



Plakkate

- 'n kalender
- 'n tienraam-klasregister
- plakkate wat met die lesplanne verband hou



Konkrete items vir onderwysers en leerders

- 'n verskeidenheid konkrete items vir onderwysers en leerders om in die klaskamer te gebruik



Assesseringshulpmiddels

- 'n assesseringskwartaalplan
- mondelinge en praktiese aktiwiteite met rubrieke/ kontrolelyste (2 per kwartaal)
- take en aktiwiteite vir beplande assessering op dag 5 van elke week (week 2–8: verwys na die Assesseringsboek)
- SR-kodeskakel na puntestaat template



2. Bala Wande learner and teacher support materials

Bala Wande Teacher's Guide

- overview of the concepts to be taught each week
- Mental Maths activities for every day (Days 1–4)
- core concept teaching activities supported by posters and manipulatives (Days 1–4)
- copies of the Bala Wande Learner's Book pages for the day (embedded in sequence in the Teacher's Guide) with solutions and teacher notes
- assessment for learning (Day 5, Weeks 2–8)
- consolidation (Day 5, Weeks 1–10)



Bala Wande Learner's Book

- daily activities that align with the lesson activities
- daily activities for learners to work on independently or in groups
- games aligned with the lesson activities



Bilingual dictionary

- a bilingual dictionary of Foundation Phase mathematical terms with explanations and examples



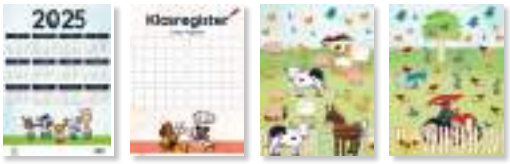
Videos

- lesson videos showing classroom footage of teachers implementing some of the planned lessons
- training videos that provide classroom footage combined with animations that highlight and exemplify good methodologies for the teaching of mathematics in the Foundation Phase



Posters

- a calendar
- a ten-frame class register
- posters aligned to the lesson plans



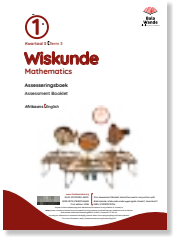
Manipulatives for the teacher and learners

- a variety of manipulatives for teachers and learners to use in the classroom



Tools for assessment

- assessment plan for each term
- oral and practical activities with rubrics/checklists (2 per term)
- planned assessment tasks and activities for the 5th day of each week (Weeks 2–8: see the Assessment Booklet)
- QR code link to mark sheet templates





Voorgestelde hulpbronne • Suggested resources

Plakkate • Posters

Kalender
Calendar



Klasregister
Class register



Ongegroepeerde plaastoneel 1 (getalle tot 5)
Unclustered farm scene 1 (numbers up to 5)



Ongegroepeerde plaastoneel 2 (getalle tot 10)
Unclustered farm scene 2 (numbers up to 10)



Gegroepeerde plaastoneel 1 (getalle tot 5)
Clustered farm scene 1 (numbers up to 5)



Gegroepeerde plaastoneel 2 (getalle tot 10)
Clustered farm scene 2 (numbers up to 10)



100-blok
100 square



Dae van die week
Days of the week



Maande van die jaar
Months of the year



Speelgeld
Money



Bomeplakkaat
Trees poster



Klaskamertoneel
Classroom scene



Getallelyn
Number line



Getallebaan
Number track

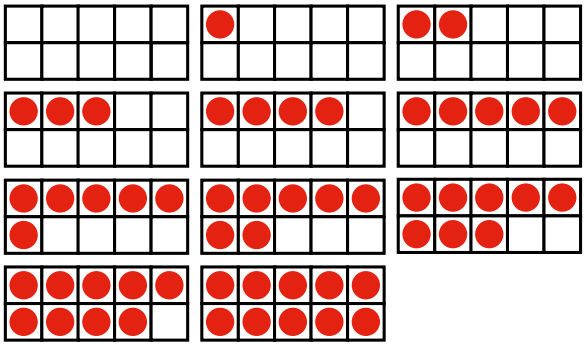


Konkrete items vir onderwyser en leerder • Teacher and learner manipulatives

Getalkaarte 0–20/0–10 (onderwyser en leerder)
Number cards 0–20/0–10 (teacher and learner)



Kolkaarte 0–10 (onderwyser en leerder)
Dot cards 0–10 (teacher and learner)



Getalnaamkaarte 0–10 – Afrikaans (onderwyser en leerder)
Number name cards 0–10 – Afrikaans (teacher and learner)



Getalnaamkaarte 0–10 – Engels (onderwyser en leerder)
Number name cards 0–10 – English (teacher and learner)



Stringe krale (onderwyser-demonstrasie en leerder)
Bead strings (teacher demo and learner)



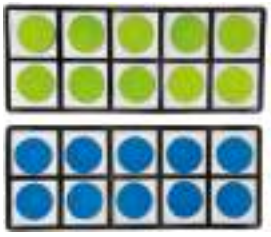
Multifix-blokkies (onderwyser en leerder)
Multifix blocks (teacher and learner)



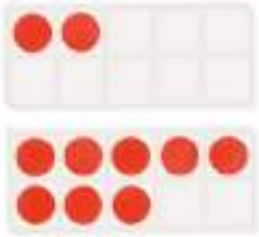
Plastiekkoppies (onderwyser-demonstrasie en leerder)
Plastic cup (teacher demo and learner)



2 magnetiese tienrame met magnetiese tellers (20 per stel)
2 magnetic ten frame with magnetic counters (20 per set)



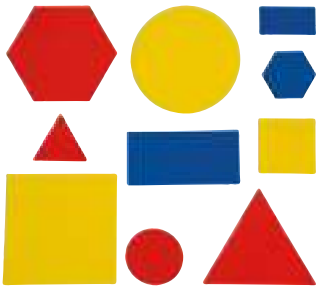
Tienrame en tellers
Ten frames and counters



Dobbelstene (een met kolle en een met getalle op)
Dice (one with dots and one with numbers)



2D vormattribuut-blokkies
2-D shape attribute blocks



3. Hoe om die Bala Wande-wiskundeprogram te gebruik

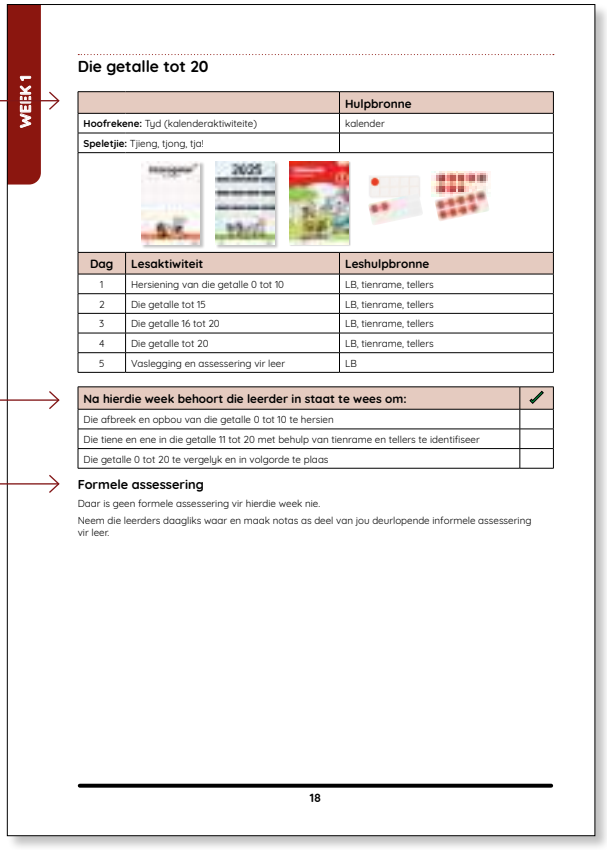
Berei vir elke week voor

Maak gebruik van die oorsig op die eerste bladsy om vir die week voor te berei.

'n Bondige oorsig van die hoofrekene en lesaktiwiteite vir die week asook die hulpbronne wat jy byderhand moet hou

'n Lys doelwitte vir die week wat jy kan gebruik om te kontroleer of jou klas steeds op koers is (informele assessering)

'n Beskrywing van die formele assesserings-aktiwiteit wat op dag 5 van die week gedoen word



WEEK 1

Die getalle tot 20

	Hulpbronne
Hoofrekene: Tyd (kalenderaktiwiteite)	kalender
Speletjie: Tjieng, tjong, tja!	

Dag	Lesaktiwiteit	Leshulpbronne
1	Hersiening van die getalle 0 tot 10	LB, tienrame, tellers
2	Die getalle tot 15	LB, tienrame, tellers
3	Die getalle 16 tot 20	LB, tienrame, tellers
4	Die getalle tot 20	LB, tienrame, tellers
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Die afbreek en opbou van die getalle 0 tot 10 te hersien	
Die tiene en ene in die getalle 11 tot 20 met behulp van tienrame en tellers te identifiseer	
Die getalle 0 tot 20 te vergelyk en in volgorde te plaas	

Formele assessering

Daar is geen formele assessering vir hierdie week nie.

Neem die leerders daagliks waar en maak notas as deel van jou deurlopende informele assessering vir leer.

18

Daar is meer besonderhede oor die week se aktiwiteite op die tweede bladsy.

'n Beskrywing van hoe die hoofrekene-aktiwiteite met verloop van die week vorder en 'n herinnering aan die speletjievideo

'n Beskrywing van die sleutelbegrippe wat jy gedurende die week moet onderrig. Notas oor die woordeskat wat hierdie week beklemtoon moet word. As daar 'n video bestaan wat hierdie sleutelbegrippe ondersteun, word die SR-kode (QR code) aan die regterkant voorsien.

'n Lys kwessies waarop die onderwysers bedag moet wees, soos foute wat die leerders dikwels begaan, belangrike idees om te beklemtoon, en sleutelwoordeskat vir die week



WEEK 1

Die getalle tot 20

Hoofrekene

Ons konsentreer hierdie week op **tyd**, en die leerders ontwikkel hul tydverwante woordeskat met behulp van 'n kalender. Die leerders gesels oor hul verjaarsdae en bespreek die **maande** van die **jaar** en die **dae** van die **week**.

Speletjie

Tjieng, tjong, tja!

Konsepontwikkeling

Ons konsentreer hierdie week op die **getalle van 0 tot 20**. Die leerders hersien die getalle 0 tot 10 voordat hulle die getalle 11 tot 20 aanleer. Terwyl ons met die getalle 0 tot 20 werk, konsentreer ons daarop om:

- getalle met behulp van tienrame op te bou en af te breek.
- 5 as 'n maklike getal in optelling te sien.
- doeltreffend met die optelling van getalle te werk te gaan deur te herken wanneer dit toepaslik is om **tien** bloot by 'n bekende getalfeit **by te tel**.
- hierdie getalle met behulp van woordeskat soos **groter as** en **kleiner as** te **beskryf**, te **orden** en te **vergelyk**.

Waarna jy hierdie week moet oplet

- Dis noodsaaklik dat die leerders die woordeskat self moet gebruik om die taal van wiskunde aan te leer en hul begrip van hierdie konsepte (**meer as**, **minder as**, **gelyk aan**, **voor**, **na**, **tussen**, **getalname [11–20]**, **tiene**, **ene** en **tel bymekaar/by**) te verbeter.
- Die konsep van 2-syfergetalle kan verwarrend vir die leerders wees en daarom is dit nuttig om tienrame vir die ontwikkeling van hul begrip van **plekwaarde** in te sluit. Dit is belangrik dat die leerders moet insien dat 'n getal soos 16 uit 1 tien en 6 ene bestaan.

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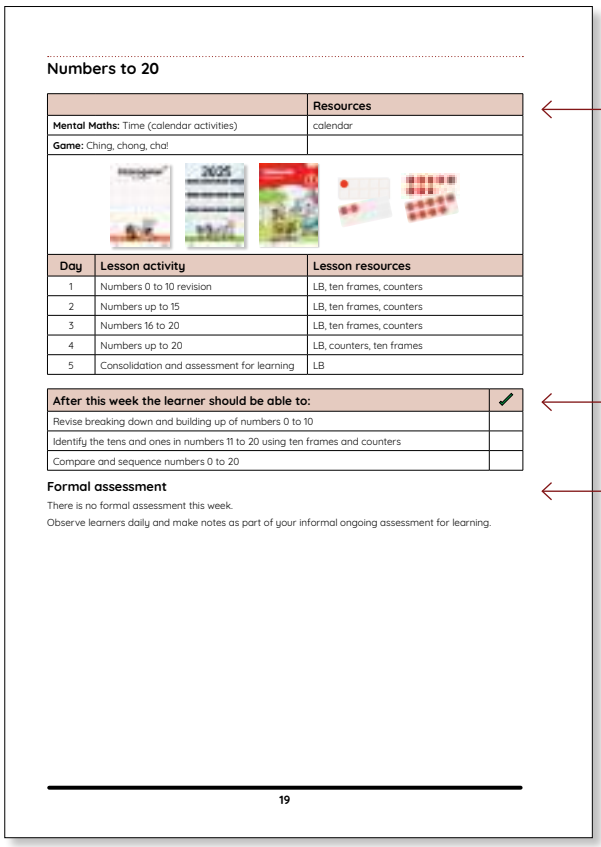
3. Using the Bala Wande mathematics programme

Prepare for each week



Numbers to 20

	Resources
Mental Maths: Time (calendar activities)	calendar
Game: Ching, chong, cha!	

Day	Lesson activity	Lesson resources
1	Numbers 0 to 10 revision	LB, ten frames, counters
2	Numbers up to 15	LB, ten frames, counters
3	Numbers 16 to 20	LB, ten frames, counters
4	Numbers up to 20	LB, counters, ten frames
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Revise breaking down and building up of numbers 0 to 10	
Identify the tens and ones in numbers 11 to 20 using ten frames and counters	
Compare and sequence numbers 0 to 20	

Formal assessment

There is no formal assessment this week.

Observe learners daily and make notes as part of your informal ongoing assessment for learning.

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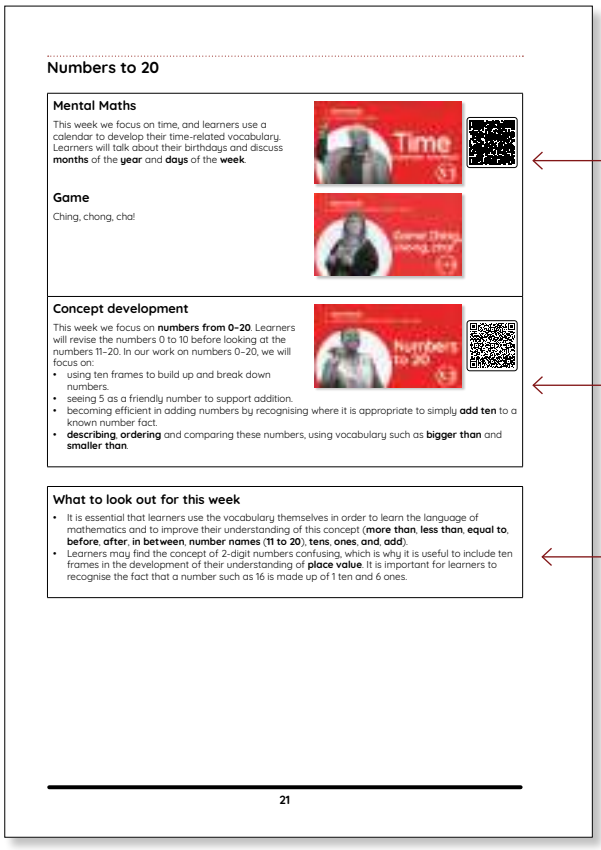
Use the overview on the first page to prepare for the week.

A quick overview of the Mental Maths and lesson activities for the week and the resources teachers will need

A list of aims for the week that can be used to check whether your class is on track (informal assessment)

A description of the formal assessment activity which is done on Day 5 of the week



Numbers to 20

Mental Maths

This week we focus on time, and learners use a calendar to develop their time-related vocabulary. Learners will talk about their birthdays and discuss **months** of the **year** and **days** of the **week**.

Game

Ching, chong, cha!

Concept development

This week we focus on **numbers from 0–20**. Learners will revise the numbers 0 to 10 before looking at the numbers 11–20. In our work on numbers 0–20, we will focus on:

- using ten frames to build up and break down numbers.
- seeing 5 as a friendly number to support addition.
- becoming efficient in adding numbers by recognising where it is appropriate to simply **add ten** to a known number fact.
- **describing**, **ordering** and comparing these numbers, using vocabulary such as **bigger than** and **smaller than**.

What to look out for this week

- It is essential that learners use the vocabulary themselves in order to learn the language of mathematics and to improve their understanding of this concept (**more than**, **less than**, **equal to**, **before**, **after**, **in between**, **number names** (**11 to 20**), **tens**, **ones**, **and**, **add**).
- Learners may find the concept of 2-digit numbers confusing, which is why it is useful to include ten frames in the development of their understanding of **place value**. It is important for learners to recognise the fact that a number such as 16 is made up of 1 ten and 6 ones.

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The second page provides more details about the week's activities.

A description of the Mental Maths and game for the week. If there is a video that supports these activities the QR codes are provided.

A description of the key concepts to be taught over the week. Notes about the vocabulary to emphasise this week. If there is a video that supports these key concepts the QR codes are provided.

A list of things teachers must watch out for such as mistakes learners often make, important ideas to emphasise and key vocabulary for the week

Wat die onderwyser moet doen om vir elke week voor te berei

- Lees die Onderwysersgids en berei vir die week asook vir elke les voor. (Kyk na die video's as dit relevant is.)
- **Nadat jy die les gegee het, moet jy besin oor hoe dit gegaan het.** Maak aantekeninge oor jou idees rakende wat jy anders sou doen indien jy die les weer moes aanbied.
- Jy moet gedurende week 2 tot 8 vir die **formele assesseringsaktiwiteit** van die week voorberei. Dit is in die besonder belangrik dat jy, tydens die weke waarin daar 'n mondelinge en praktiese assessering plaasvind, moet beplan hoe jy elke leerder se vordering in die loop van die week met behulp van die rubriek sal kan aanteken.

Elke dag

Gebruik die register om die leerders in die klas te tel



Die Bala Wande-program het 'n spesiale klasregisterplakkaat ontwerp. Elke leerder moet hulself elke dag afmerk deur 'n kol of hul voorletters op die register in te vul. Maak seker dat die leerders die tienrame opeenvolgend op die register invul.

Aan die begin van die wiskundeklas tel jy die aantal leerders wat aanwesig is, byvoorbeeld: "Tien; twintig; dertig; veertig; vier. Vier en veertig leerders is vandag teenwoordig."

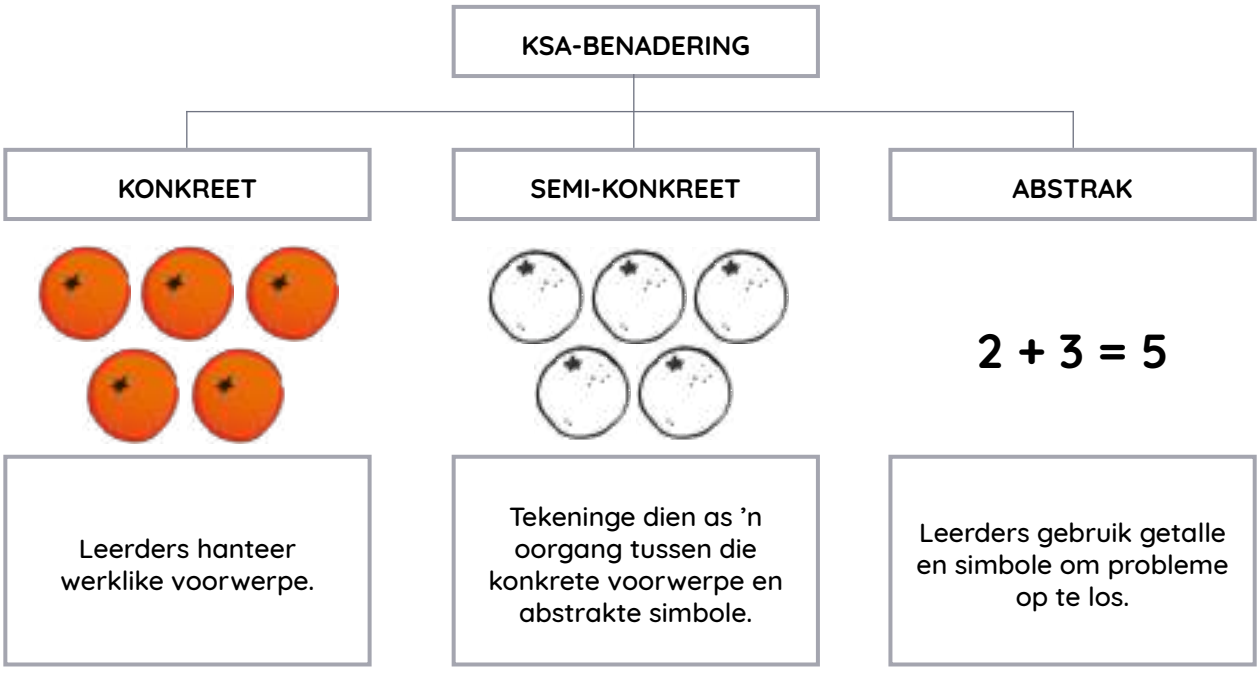
Hierdie aktiwiteit, wat daagliks herhaal word, versterk die idee dat die groepering en telling in tiene doeltreffend is en voorkom dat die leerders in ene tel.



Bespreek vandag se datum met die leerders deur die kalender te gebruik

Gebruik die kalender om elke dag die jaar, maand, dag en datum saam met die klas te identifiseer. Merk die datum op die muurkalender af. Neem kennis van enige verjaarsdae. Dit maak op elke dag van die jaar deel van die onderrig van tyd uit.

Ons gebruik die Konkreet, Semi-Konkreet, Abstrak (KSA) benadering wanneer ons wiskunde onderrig



What teachers need to do to prepare for each week

- Read the guide and prepare for the week and for each lesson (watch the videos if relevant).
- **After teaching the lesson, reflect on how it went.** Make notes on what went well and what to do differently next time.
- In Weeks 2–8, prepare for the **formal assessment** activity of the week. In the weeks in which there is an oral and practical assessment, teachers need to plan how to record each learner's progress using the rubric or checklist over the course of the week.

Each day

Use the register to count the learners in the class

The Bala Wande programme has created a special class register poster. Every day, each learner will mark themselves by putting a dot or their initials on the register. Ensure that the learners fill the ten frames on the register in order.

At the start of the maths class, use the register to count the number of learners present. For example, "Ten, twenty, thirty, forty, four. Forty-four learners are present today."

This repeated daily activity reinforces the idea that grouping and counting in tens is efficient and steers learners away from counting in ones.

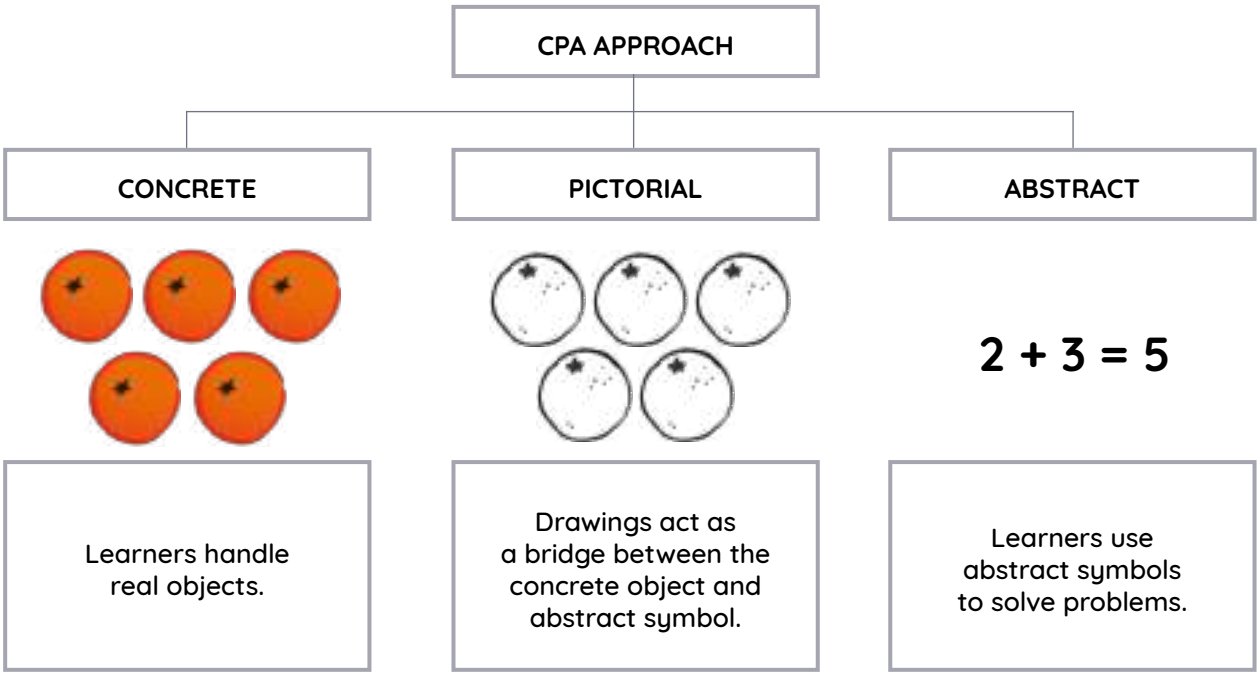




Discuss the date with learners using the calendar

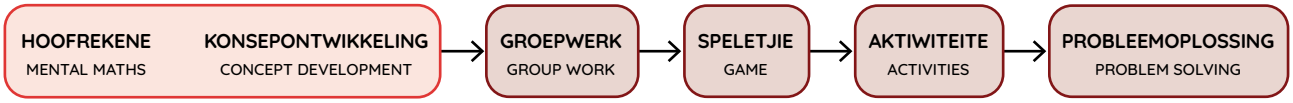
Use the calendar to identify the year, month, day and date with the class each day. Mark the date on the wall calendar. Note any birthdays. This forms part of the teaching of time every day of the year.

We use the Concrete, Pictorial, Abstract (CPA) approach when teaching mathematics



Gebruik die vloeidiagram om die opeenvolging van aktiwiteite vir die dag te beskou

Daar word met die aanvang van elke dag 'n vloeidiagram voorsien waarop die opeenvolging van aktiwiteite vir die dag opgesom word.



Doen die hoofrekene-aktiwiteit (15 minute)

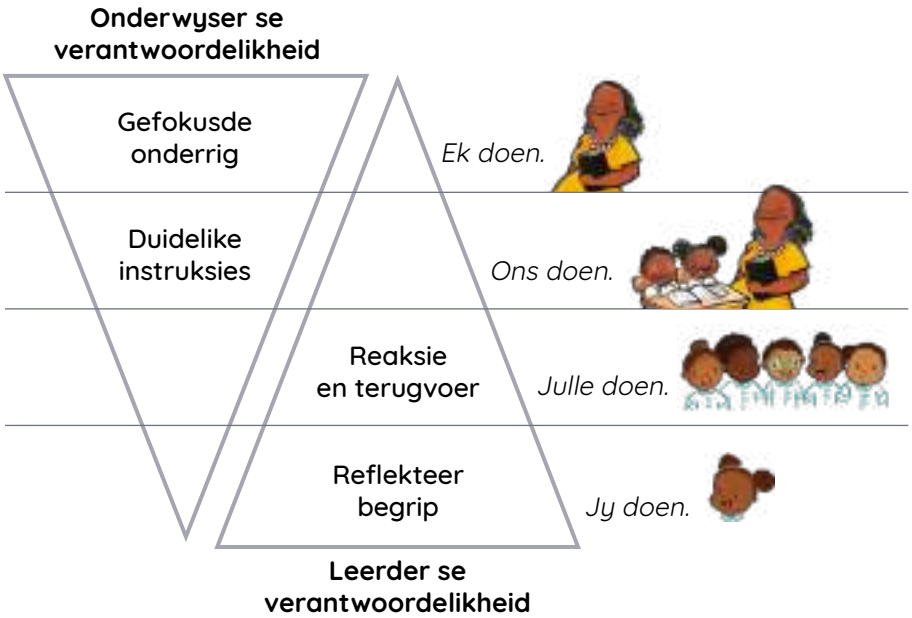


Hoofrekene is 'n belangrike komponent van elke les. **Tel word ingesluit tydens die onderrig van Hoofreken.** Ons gebruik die hoofrekene-aktiwiteite om te verseker dat die leerders gemaklik met die basiese feite omgaan. Daar is video's waarin getoon word hoe die hoofrekene-aktiwiteite in die klaskamer gedoen word, en 'n beskrywing van die hoofrekene-aktiwiteite word in die oorsig vir die week gegee. Daar word elke dag 'n fotografiese herinnering aan die hoofrekene-aktiwiteit vir die dag in die onderwysersgids voorsien.

Doen die konsepontwikkelingsaktiwiteit (30 minute)

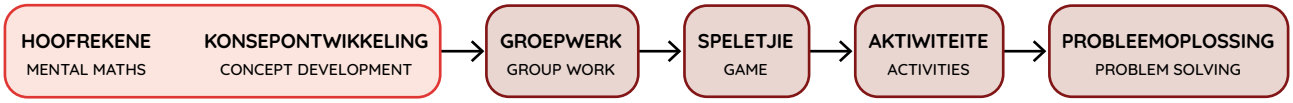
Konsepontwikkeling vind plaas wanneer die leerders as 'n klas saamwerk om die sleutelwiskundebegrip van die dag te bespreek voordat hulle in kleiner groepe verdeel word of individueel begin werk. Daar bestaan enkele video's waarop die konsepontwikkelingsaktiwiteite in aksie in die klaskamer vertoon word, en daar word 'n beskrywing van die aktiwiteite in die oorsig vir die week gegee. Daar is 'n daaglikse fotografiese sekwensie om die konsepontwikkelingsaktiwiteite in die Onderwysersgids te demonstreer.

Groepwerk is 'n baie belangrike deel van 'n wiskunde les, aangesien positiewe groepervarings leer en begrip ondersteun. Groepwerk versterk vaardighede wat bydra tot effektiewe toepassing tydens onafhanklike aktiwiteite. Onderwysers moet groepwerk goed beplan sodat dit tot positiewe gevolge kan lei. Aktiwiteite moet toepaslik wees – relevant vir die konsepte wat voor of tydens die groepwerksessie geleer word. Genoeg tyd moet gegee word om leerders in staat te stel om konsepte te begryp deur portuuronderrig en -leer tydens groepwerk.



Use the flow diagram to see the sequence of activities for the day

At the start of each day, there is a flow diagram which summarises the sequence of activities for the day.



Do the Mental Maths activity (15 minutes)

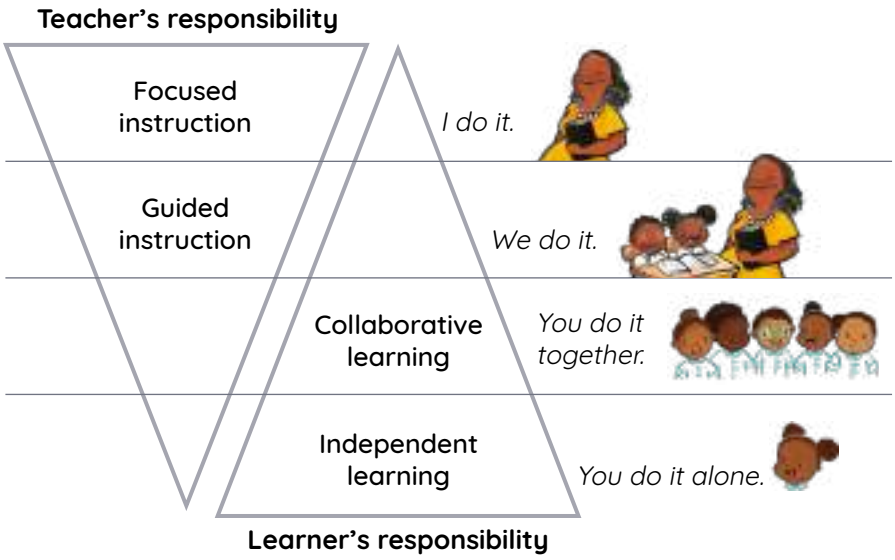


Mental Maths is an important component of every lesson. **Counting is included in the Mental Maths component of the lesson.** We use the Mental Maths activities to ensure that learners become fluent in the basic facts. There are some videos showing the Mental Maths activities in action in the classroom and there is a description of the Mental Maths activity in the overview for the week. At the start of each week, there is a photographic sequence that illustrates the Mental Maths activity that must be done every day of the week.

Do the Concept Development (30 minutes)

Concept development is when the learners work together as a class to discuss the key mathematical concept of the day, before they break into smaller groups or work individually. There are some videos showing the concept development activities in action in the classroom and there is a description of the activities in the overview for the week. In the Teacher's Guide, there is a daily photographic sequence to demonstrate the concept development activities.

Group work is an important part of a maths lesson since positive group experiences support learning and retention. Group work can also reinforce skills that are relevant to individual work. Teachers must manage group work carefully in order for it to lead to positive effects. Tasks should be selected that are appropriate – relevant to the concepts taught prior to the group work session. Enough time should be given to allow learners to complete the tasks together, allowing for peer teaching and learning.

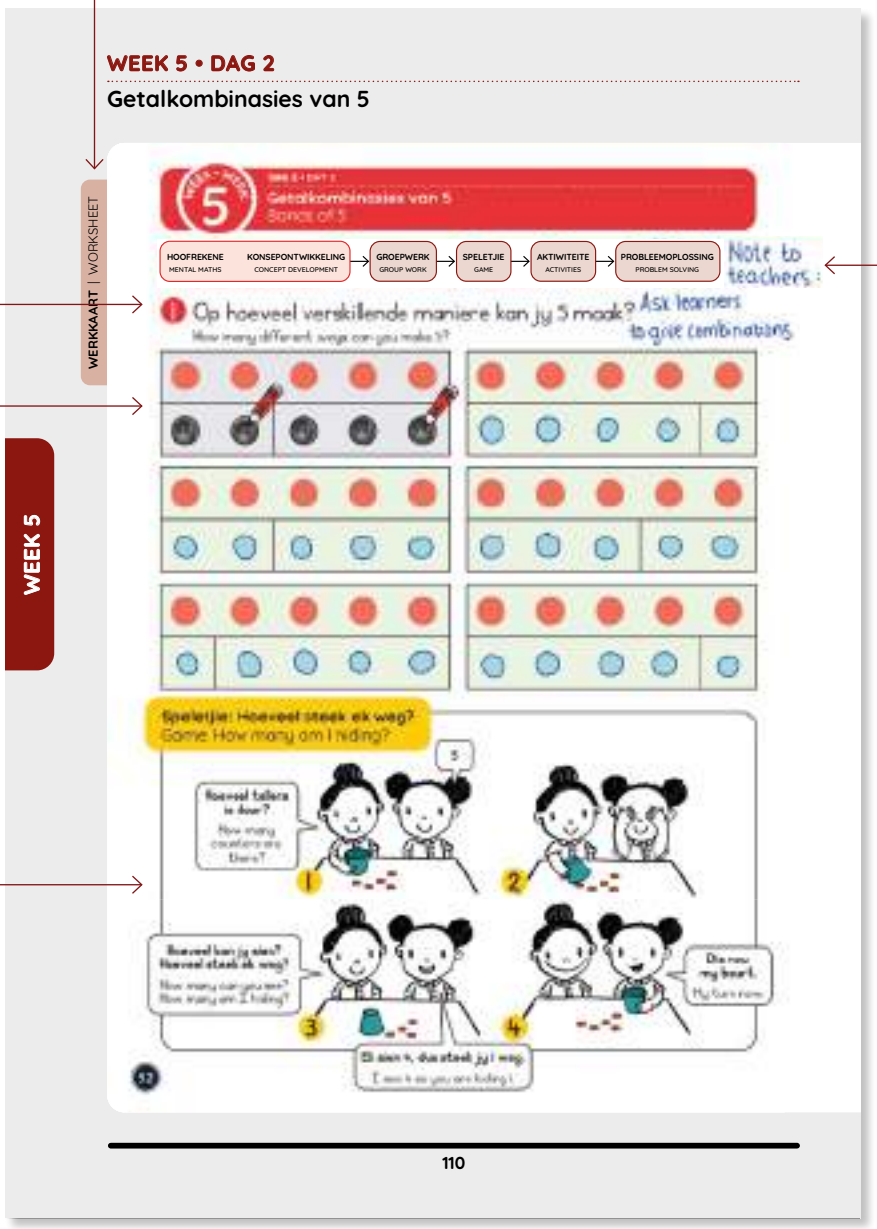


Die *Die Bala Wande*-leerdersboek is in die onderwysersgids opgeneem

Die wynrooi merker dui aan dat dit ’n werkkaart is.

Oplossings word voorsien om die onderwyser te ondersteun. Op sommige bladsye is daar kort opmerkings (in Engels) vir bykomende leiding geskryf.

Al die instruksies en inligting word in Afrikaans gegee, met die Engelse vertaling daar onder.



Die leerders-werkkaarte bevat ’n uitgewerkte voorbeeld (deur die grys agtergrond en rooi potlood aangedui).

Die aktiwiteite lyk presies soos die leerders dit in hul boeke sal sien.

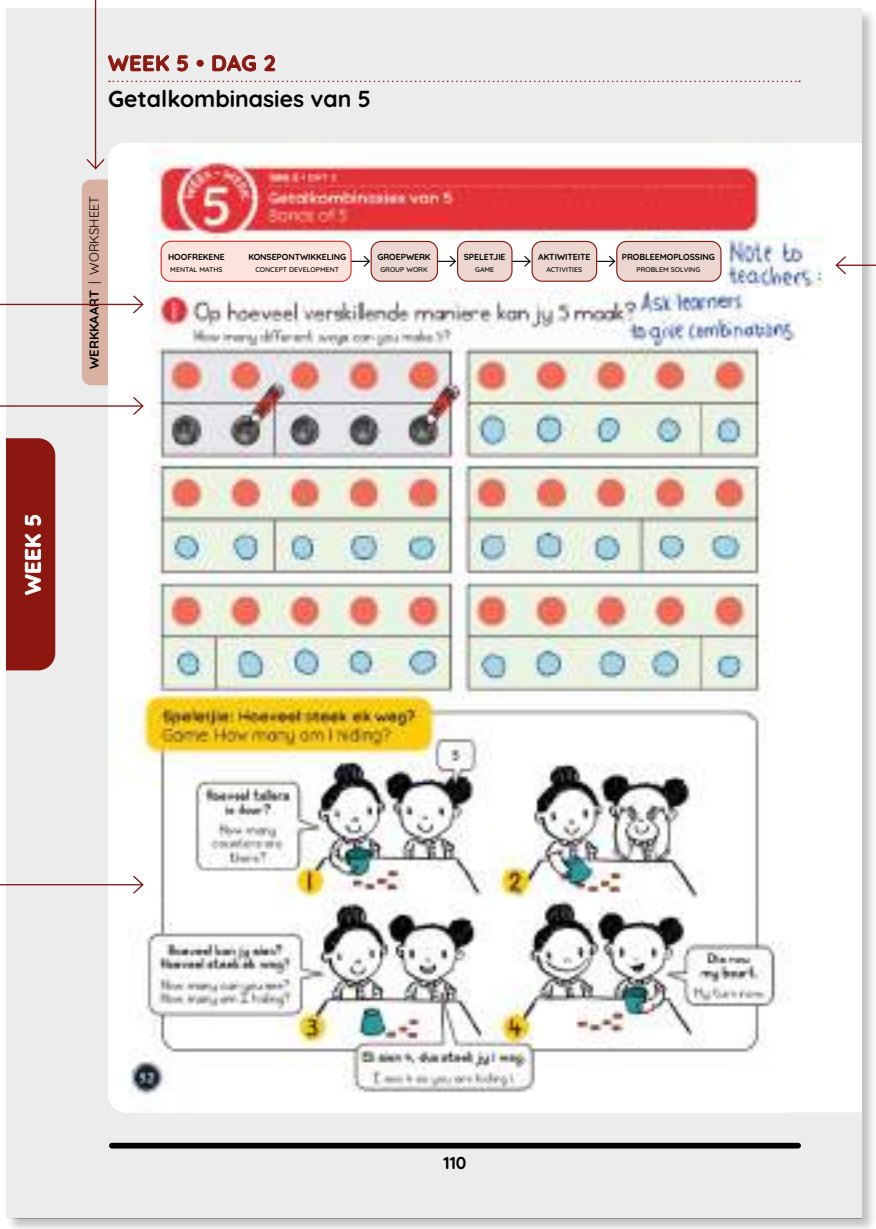
Hier word byvoorbeeld ’n tekenprent gegee van ’n speletjie wat die leerders kan speel. Wanneer ’n nuwe speletjie aan die leerders bekendgestel word, is dit die beste om die speletjie eers aan die hele klas te demonstreer voordat die leerders dit in pare of groepe speel.

The *Bala Wande* Learner's Book pages are embedded in the Teacher's Guide

The burgundy tag indicates that this is a worksheet.

Solutions are provided to support the teacher. On some pages, short comments are written (in English) for additional guidance.

All instructions and information are given in Afrikaans with an English translation below.



Learner worksheets have a worked example (indicated by the grey background and the red pencil).

The activities are exactly as the learners will see them in their books.

Here, for example, we have a cartoon of a game that the learners will play. Demonstrate the game to the whole class before letting learners play in pairs or groups.

4. Kwartaalplan

	Dag 1	Dag 2	Dag 3	Dag 4	Dag 5
Week 1 Die getalle tot 20	Hersiening van die getalle 0 tot 10	Die getalle tot 15	Die getalle 16 tot 20	Die getalle tot 20	Assessering en vaslegging
Week 2 Vergelyk, tel op en trek af tot 20	Vergelyk en orden die getalle 0 tot 20	Optelling tot 20	Aftrekking tot 20	Nog optelling en aftrekking tot 20	Assessering en vaslegging
Week 3 Optelling- en aftrekkings-probleme	Optellings-woord-probleme	Aftrekkings-woord-probleme	Die optelling en aftrekking van 3 getalle	Gemengde bewerkings	Assessering en vaslegging
Week 4 Volume en kapasiteit	Vergelyk volume en kapasiteit	Meet volume en kapasiteit	Meet volume en kapasiteit	Meet volume en kapasiteit	Assessering en vaslegging
Week 5 Optellingspatrone	Die getalle op 'n getallelyn	Tel by 9 by	Tel by 8 en 7 by	Optellings-patrone	Assessering en vaslegging
Week 6 Optelling met oorbrugging van 10	Optelling met oorbrugging van 10	Optelling met oorbrugging van 10	Optellings-woord-probleme	Optelling-stories	Assessering en vaslegging
Week 7 Datahantering	Organiseer data	Organiseer en ontleed data	Stel data voor en interpreteer dit	Stel data voor en interpreteer dit	Assessering en vaslegging
Week 8 Aftrekkingspatrone	Aftrekking met oorbrugging van 10	Trek 9 af	Trek 8 en 7 af	Aftrekkings-patrone	Assessering en vaslegging
Week 9 Aftrekking met oorbrugging van 10	Aftrekking met oorbrugging van 10	Aftrekking met oorbrugging van 10	Kry die ontbrekende getal	Aftrekking met oorbrugging van 10	Assessering en vaslegging
Week 10 Aftrekkings-probleme	Aftrekkings-woord-probleme	Aftrekking-stories	Getalsinne	Getal-kombinasie-patrone	Assessering en vaslegging

Getalle, Bewerkings en Verwantskappe	**Patrone, Funksies en Algebra**	**Ruimte en Vorm (Geometrie)**	**Meting**	**Datahantering**

4. Term plan

	Day 1	Day 2	Day 3	Day 4	Day 5
Week 1 Numbers to 20	Numbers 0 to 10 revision	Numbers up to 15	Numbers 16 to 20	Numbers up to 20	Assessment and consolidation
Week 2 Compare, add and subtract up to 20	Compare and order numbers 0 to 20	Addition up to 20	Subtraction up to 20	More addition and subtraction up to 20	Assessment and consolidation
Week 3 Addition and subtraction problems	Addition word problems	Subtraction word problems	Addition and subtraction of 3 numbers	Mixed operations	Assessment and consolidation
Week 4 Volume and capacity	Comparing volume and capacity	Measuring volume and capacity	Measuring volume and capacity	Measuring volume and capacity	Assessment and consolidation
Week 5 Addition patterns	Numbers on a number lines	Adding on to 9	Adding on to 8 and 7	Addition patterns	Assessment and consolidation
Week 6 Addition bridging 10	Addition bridging 10	Addition bridging 10	Addition word problems	Addition stories	Assessment and consolidation
Week 7 Data handling	Organising data	Organising and analysing data	Representing and interpreting data	Representing and interpreting data	Assessment and consolidation
Week 8 Subtraction patterns	Subtraction bridging 10	Subtracting 9	Subtracting 8 and 7	Subtraction patterns	Assessment and consolidation
Week 9 Subtraction bridging 10	Subtraction bridging 10	Subtraction bridging 10	Find the missing number	Subtraction bridging 10	Assessment and consolidation
Week 10 Subtraction problems	Subtraction word problems	Subtraction stories	Number sentences	Number bond patterns	Assessment and consolidation

Numbers, Operations and Relationships	Patterns, Functions and Algebra	Space and Shape (Geometry)	Measurement	Data Handling

Die getalle tot 20

	Hulpbronne
Hoofrekene: Tyd (kalenderaktiwiteite)	kalender
Speletjie: Tjieng, tjong, tja!	









Dag	Lesaktiwiteit	Leshulpbronne
1	Hersiening van die getalle 0 tot 10	LB, tienrame, tellers
2	Die getalle tot 15	LB, tienrame, tellers
3	Die getalle 16 tot 20	LB, tienrame, tellers
4	Die getalle tot 20	LB, tienrame, tellers
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Die afbreek en opbou van die getalle 0 tot 10 te hersien	
Die tiene en ene in die getalle 11 tot 20 met behulp van tienrame en tellers te identifiseer	
Die getalle 0 tot 20 te vergelyk en in volgorde te plaas	

Formele assessering

Daar is geen formele assessering vir hierdie week nie.

Neem die leerders daagliks waar en maak notas as deel van jou deurlopende informele assessering vir leer.

Numbers to 20

	Resources
Mental Maths: Time (calendar activities)	calendar
Game: Ching, chong, cha!	










Day	Lesson activity	Lesson resources
1	Numbers 0 to 10 revision	LB, ten frames, counters
2	Numbers up to 15	LB, ten frames, counters
3	Numbers 16 to 20	LB, ten frames, counters
4	Numbers up to 20	LB, counters, ten frames
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Revise breaking down and building up of numbers 0 to 10	
Identify the tens and ones in numbers 11 to 20 using ten frames and counters	
Compare and sequence numbers 0 to 20	

Formal assessment

There is no formal assessment this week.

Observe learners daily and make notes as part of your informal ongoing assessment for learning.

Die getalle tot 20

Hoofrekene

Ons konsentreer hierdie week op **tyd**, en die leerders ontwikkel hul tydverwante woordeskat met behulp van ’n kalender. Die leerders gesels oor hul verjaarsdae en bespreek die **maande** van die **jaar** en die **dae** van die **week**.



Speletjie

Tjieng, tjong, tja!



Konsepontwikkeling

Ons konsentreer hierdie week op die **getalle van 0 tot 20**. Die leerders hersien die getalle 0 tot 10 voordat hulle die getalle 11 tot 20 aanleer. Terwyl ons met die getalle 0 tot 20 werk, konsentreer ons daarop om:



- getalle met behulp van tienrame op te bou en af te breek.
- 5 as ’n maklike getal in optelling te sien.
- doeltreffend met die optelling van getalle te werk te gaan deur te herken wanneer dit toepaslik is om **tien** bloot by ’n bekende getalfeit **by te tel**.
- hierdie getalle met behulp van woordeskat soos **groter as** en **kleiner as** te **beskryf**, te **orden** en te **vergelyk**.

Waarna jy hierdie week moet oplet

- Dis noodsaaklik dat die leerders die woordeskat self moet gebruik om die taal van wiskunde aan te leer en hul begrip van hierdie konsepte (**meer as**, **minder as**, **gelyk aan**, **voor**, **na**, **tussen**, **getalname [11–20]**, **tiene**, **ene** en **tel bymekaar/by**) te verbeter.
- Die konsep van 2-syfergetalle kan verwarrend vir die leerders wees en daarom is dit nuttig om tienrame vir die ontwikkeling van hul begrip van **plekwaarde** in te sluit. Dit is belangrik dat die leerders moet insien dat ’n getal soos 16 uit 1 tien en 6 ene bestaan.

Numbers to 20

Mental Maths

This week we focus on time, and learners use a calendar to develop their time-related vocabulary. Learners will talk about their birthdays and discuss **months** of the **year** and **days** of the **week**.



Game

Ching, chong, cha!



Concept development

This week we focus on **numbers from 0–20**. Learners will revise the numbers 0 to 10 before looking at the numbers 11–20. In our work on numbers 0–20, we will focus on:



- using ten frames to build up and break down numbers.
- seeing 5 as a friendly number to support addition.
- becoming efficient in adding numbers by recognising where it is appropriate to simply **add ten** to a known number fact.
- **describing**, **ordering** and comparing these numbers, using vocabulary such as **bigger than** and **smaller than**.

What to look out for this week

- It is essential that learners use the vocabulary themselves in order to learn the language of mathematics and to improve their understanding of this concept (**more than**, **less than**, **equal to**, **before**, **after**, **in between**, **number names** (**11 to 20**), **tens**, **ones**, **and**, **add**).
- Learners may find the concept of 2-digit numbers confusing, which is why it is useful to include ten frames in the development of their understanding of **place value**. It is important for learners to recognise the fact that a number such as 16 is made up of 1 ten and 6 ones.

WEEK 1 • DAG 1

Hersiening van die getalle 0 tot 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

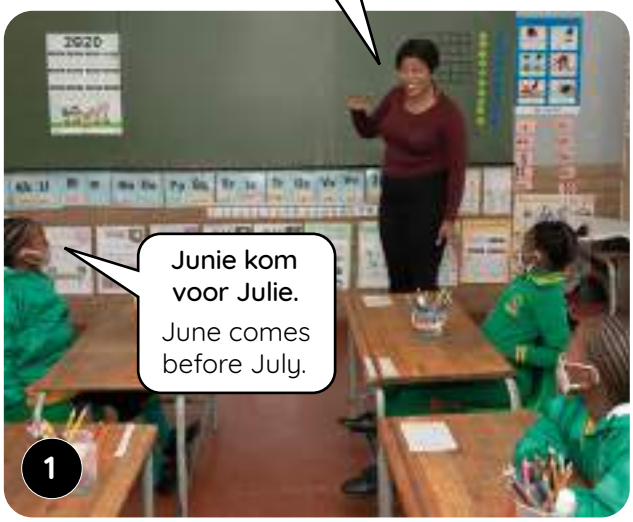
HOOFREKENE | MENTAL MATHS

Noem die maande van die jaar en die dae van die week op en plaas dit met behulp van die Bala Wande-kalender in die korrekte volgorde. Voeg die leerders se verjaarsdae op die kalender in.

Use the Bala Wande calendar to name and sequence months of the year and days of the week. Add learners' birthdays to the calendar.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.









Numbers 0 to 10 revision

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

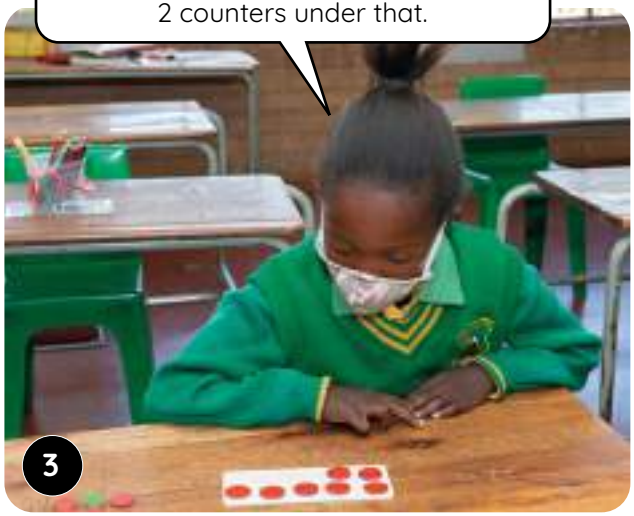
Kom ons wys 7 op 'n tienraam.
Let's show 7 on a ten frame.



Hoe sit julle jul tellers by jul tienraam in?
How do you place your counters on your ten frame?



Ek maak eers die boonste ry vol en sit dan 2 tellers onder die boonste ry in.
I fill up the top row first and then put 2 counters under that.



Ons kan sien dat 7 dieselfde as 5 + 2 is.
We can see that 7 is the same as 5 + 2.



Kom ons skryf die getalsin.
Let's write the number sentence.



Gee die leerders geleentheid om die stappe hier bo met die getalle 6, 7, 8, 9 en 10 te herhaal. Sodoende word die visualisering van die getalle tot tien in die vorm van 5 + _____ vasgelê. Ons sê dat 5 'n 'maklike getal' is om ons te help om tot tien op te bou.

Give learners an opportunity to repeat the steps above with the numbers 6, 7, 8, 9 and 10. This consolidates visualisation of numbers to ten in the form 5 + _____ . We say, that 5 is a 'friendly number' to help us build up to ten.

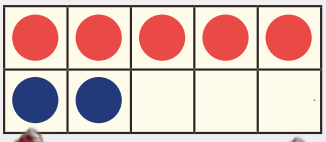
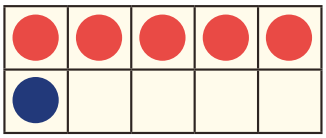
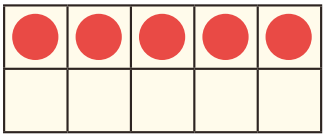
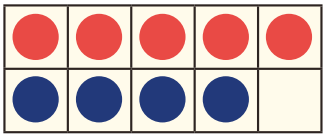
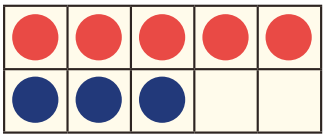
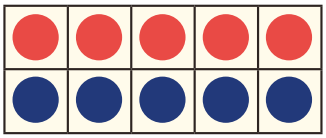
WEEK • WEEK 1

DAG 1 • DAY 1

Hersiening van die getalle 0 tot 10
Numbers 0 to 10 revision

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Hoeveel is dit? Skryf die getalsin neer.
How many? Write the number sentence.

 7	5 + 2 = 7
 6	5 + 1 = 6
 5	5 + 0 = 5
 9	5 + 4 = 9
 8	5 + 3 = 8
 10	5 + 5 = 10

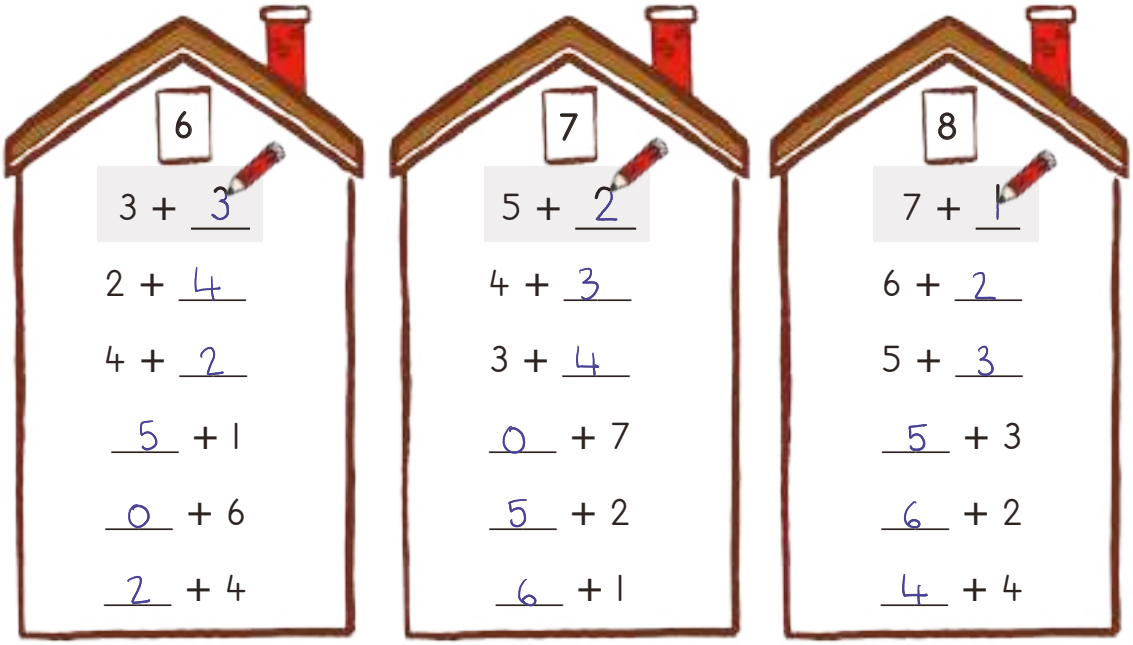
2 Hoeveel blokkies is daar?
How many blocks?

	5 + 5 = 10
	5 + 4 = 9
	5 + 3 = 8
	5 + 2 = 7
	5 + 1 = 6
	5 + 0 = 5

Numbers 0 to 10 revision

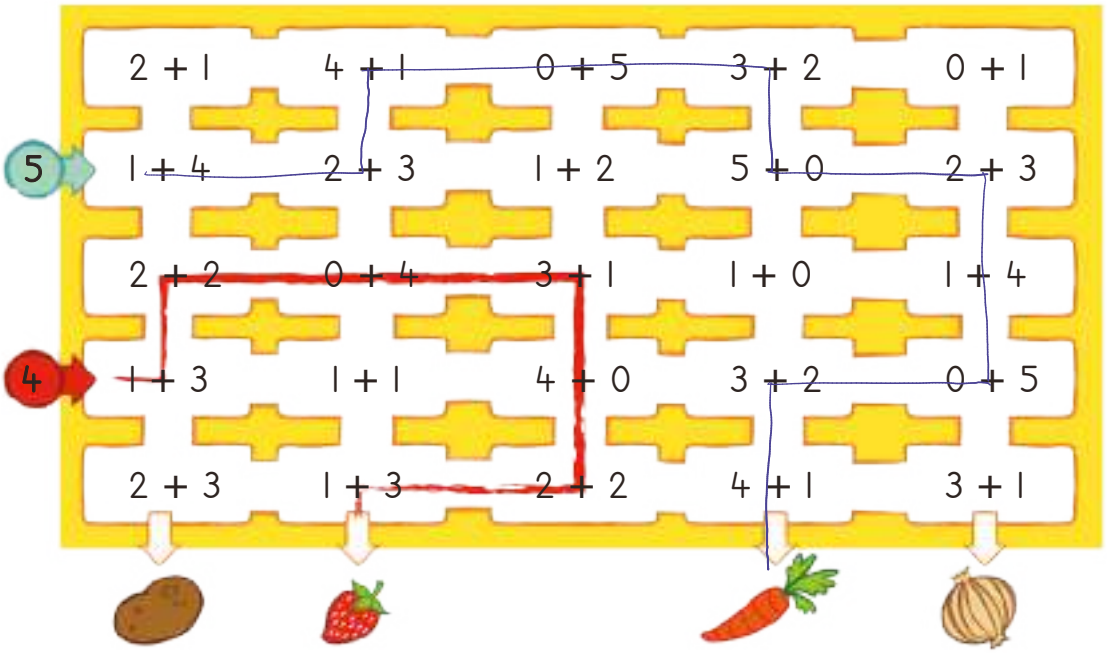
3 Voltooi om die boonste getal te kry.

Complete to match the number at the top.



4 Volg die pad wat 5 gee. Die pad wat 4 gee, is reeds gedoen.

Follow the path of 5. The path of 4 has been done for you.



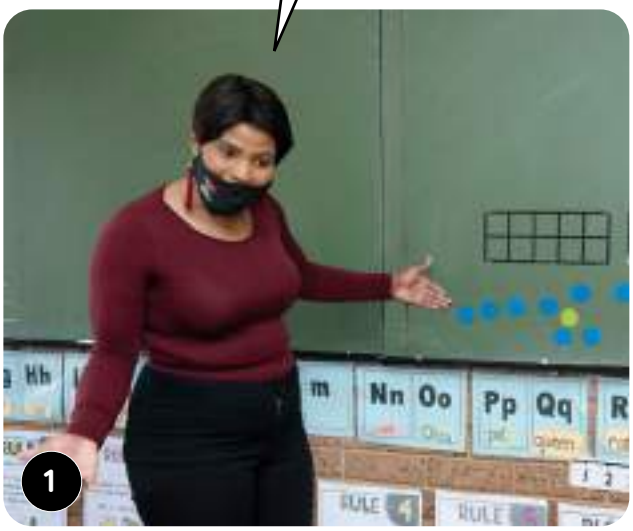
WEEK 1 • DAG 2

Die getalle tot 15

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Hoeveel tellers het ek op die bord gesit? Een van julle moet kom en dit op die tienrame pak.
How many counters have I stuck on the board? Come and sort them into the ten frames.





Ek het een tienraam vol tellers en 'n tweede tienraam met nog een teller. Dis die getal 11.
I have one full ten frame and one more counter in the second ten frame. This is the number 11.



Sit 11 tellers by jul tienrame in.
Put 11 counters into your ten frames.



Numbers up to 15









Gee die leerders geleentheid om die stappe hier bo met die getalle 12, 13, 14 en 15 te herhaal. Met hierdie aktiwiteit word die struktuur van getalle wat groter as 10 is, vasgelê as getalle in die vorm van 10 en _____ of 10 + _____.

Give learners an opportunity to repeat the steps above with numbers 12, 13, 14 and 15. This activity consolidates the structure of numbers bigger than 10 as numbers of the form 10 and _____ or 10 + _____.

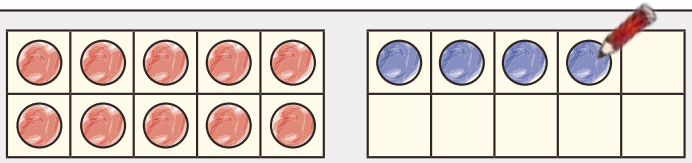
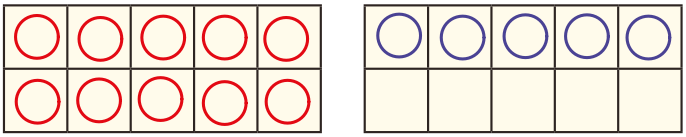
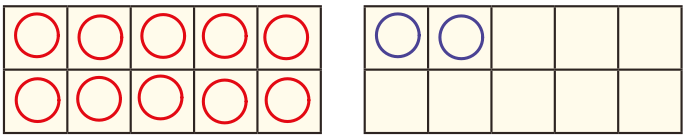
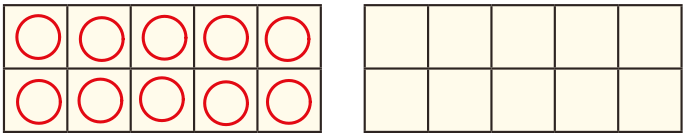
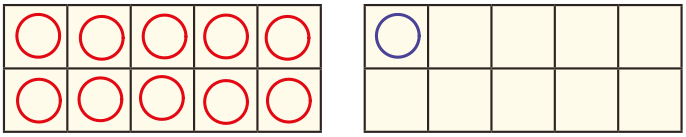
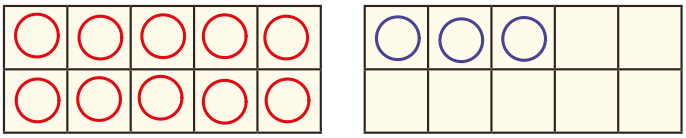
WEEK • WEEK 1

DAG 2 • DAY 2

Die getalle tot 15
Numbers up to 15

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Skryf die getalsin neer. Teken die kolle.
Write the number sentence. Draw the dots.

14 = 10 + 4	
15 = 10 + 5	
12 = 10 + 2	
10 = 10 + 0	
11 = 10 + 1	
13 = 10 + 3	

2 Vul die ontbrekende getalle in.
Fill in the missing numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Numbers up to 15

3 Skryf die getalle neer.
Write the numbers.

staan na comes after	
10	11
8	9
11	12
9	10
14	15
7	8
12	13

staan voor comes before	
12	13
6	7
9	10
4	5
8	9
14	15
13	14

staan tussen comes between		
9	10	11
5	6	7
8	9	10
12	13	14
13	14	15
10	11	12
6	7	8

4 Omkring die getal wat **groter** is.
Circle the **bigger** number.

(7)	5	(11)	9	(15)	10	7	(12)

5 Omkring die getal wat **kleiner** is.
Circle the **smaller** number.

11	(5)	(9)	14	12	(2)	(5)	15

WEEK 1 • DAG 3

Die getalle 16 tot 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons sit die tellers op die harte om te sien hoeveel harte daar is.
Let's match the counters on to the hearts to see how many there are.

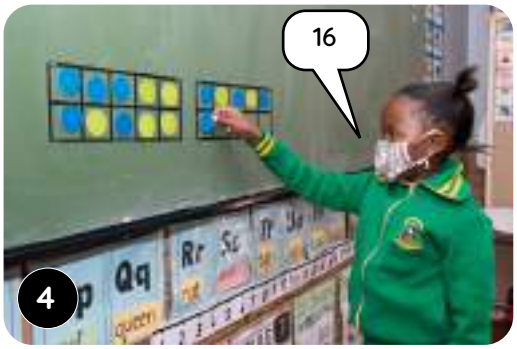


Kom ons sorteer dit op die tienraam om te sien hoeveel harte daar is.
Let's sort onto the ten frame to see how many hearts we have.



Sit die tellers op jul tienrame.
Put the counters into your ten frames.





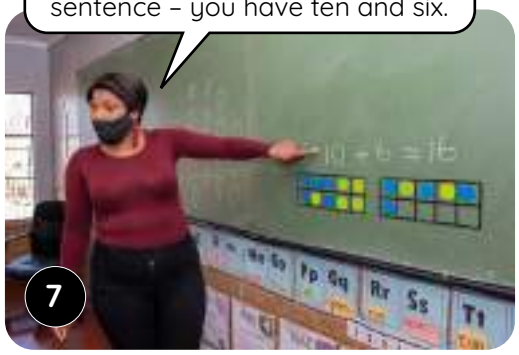


Wat merk jy op oor hoe jy jou tienrame volgemaak het?
What do you notice about the way you filled your ten frames?

Daar is 10 tellers in die een tienraam en 6 tellers in die ander tienraam.
One ten frame has 10 counters and the other ten frame has 6 counters.



Kom ons skryf dit as 'n getalsin – julle het tien en ses.
Let's write this as a number sentence – you have ten and six.



Gee die leerders geleentheid om die stappe hier bo met die getalle 17, 18, 19 en 20 te herhaal om die getalgebied tot 20 uit te brei. Wys hulle hoe hulle elke getal moet sê en skryf.

Give learners an opportunity to repeat the steps above with numbers 17, 18, 19 and 20 to extend the number range to 20. Show them how to say and write each number.

Numbers from 16 to 20

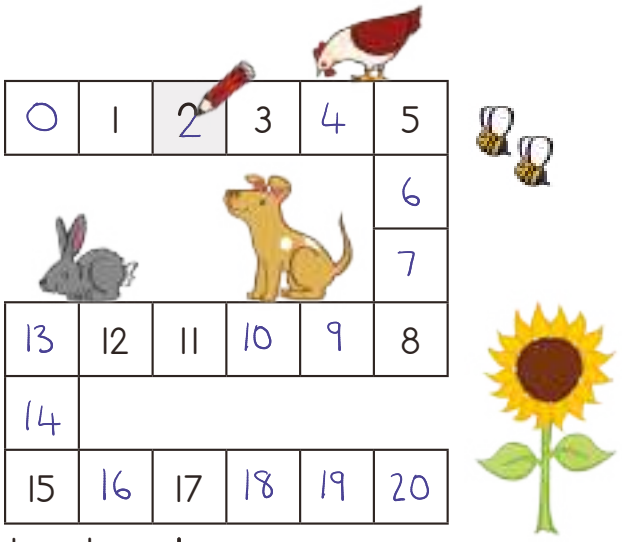
WEEK • WEEK 1

DAG 3 • DAY 3

Die getalle 16 tot 20
Numbers 16 to 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Vul die ontbrekende getalle in.
Fill in the missing numbers.



0	1	2	3	4	5
					6
					7
13	12	11	10	9	8
14					
15	16	17	18	19	20

2 Omkring die getal wat **groter** is.
Circle the **bigger** number.

12	(20)	9	(19)	13	(15)	(16)	11

3 Omkring die getal wat **kleiner** is.
Circle the **smaller** number.

9	(6)	20	(2)	(5)	8	(15)	17

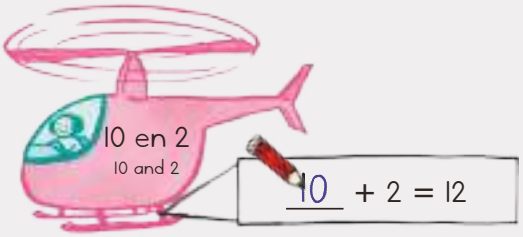
4 Breek die getalle in tiene en ene af.
Break down the numbers into tens and ones.

12	15	11
10 + 2	10 + 5	10 + 1
13	14	10
10 + 3	10 + 4	10 + 0

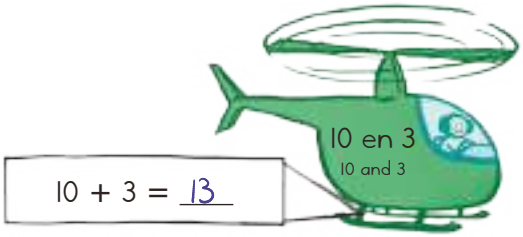
Die getalle 16 tot 20

5 Voltooi die getalsinne.

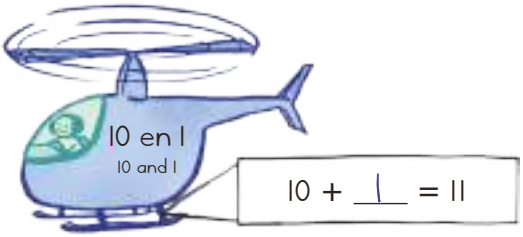
Complete the number sentences.



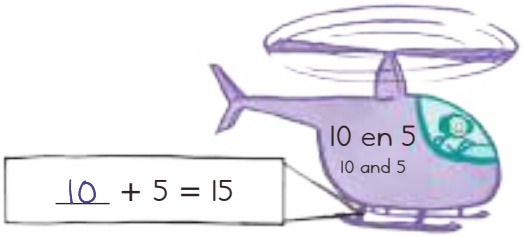
10 + 2 = 12



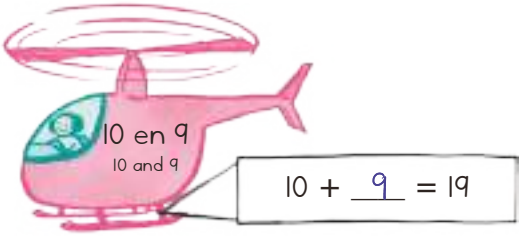
10 + 3 = 13



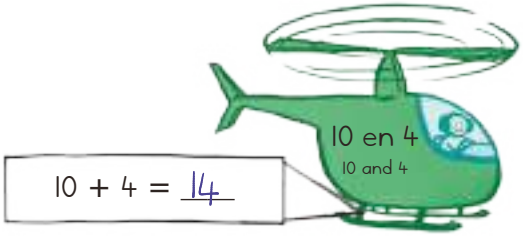
10 + 1 = 11



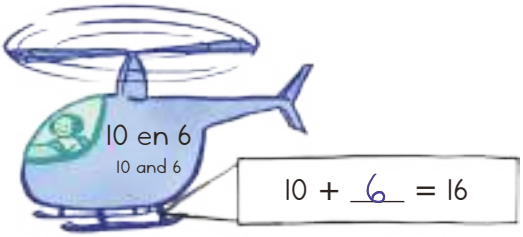
10 + 5 = 15



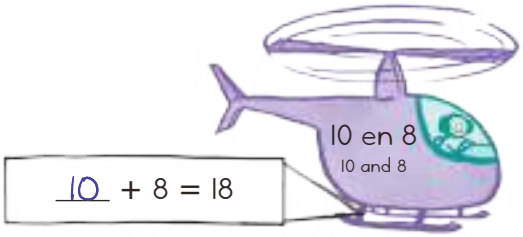
10 + 9 = 19



10 + 4 = 14



10 + 6 = 16



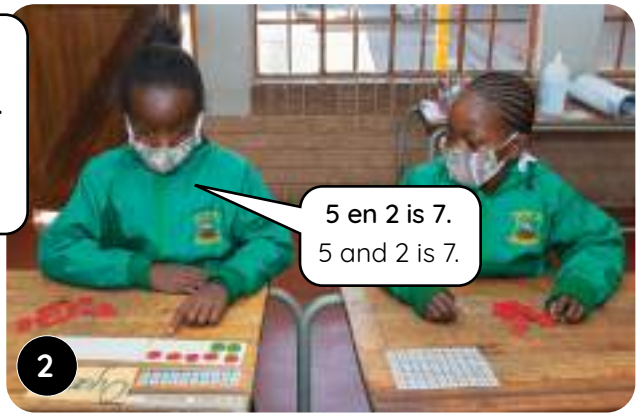
10 + 8 = 18

Numbers up to 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT













Gee die leerders geleentheid om die stappe hier bo met die volgende optellingsprobleme te herhaal:

Give learners an opportunity to repeat the steps above with the following addition problems:

- **3 + 5 en/and 13 + 5**
- **1 + 4 en/and 11 + 4**
- **4 + 4 en/and 14 + 4**
- **2 + 7 en/and 12 + 7**

WEEK • WEEK 1

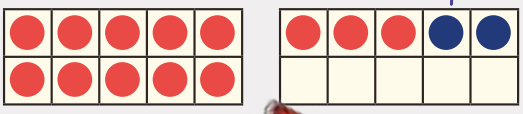
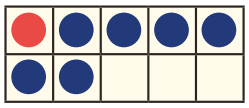
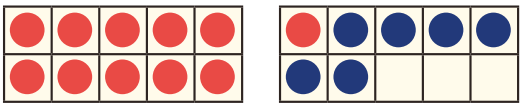
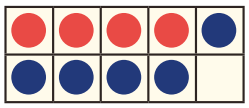
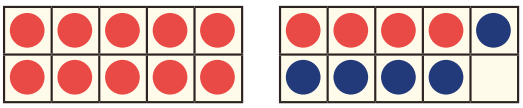
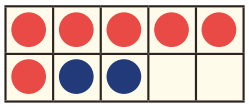
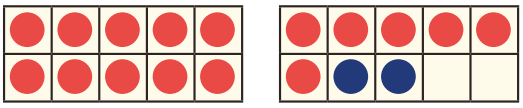
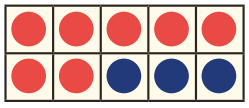
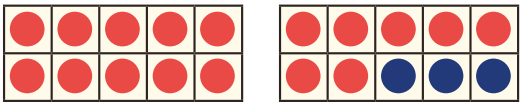
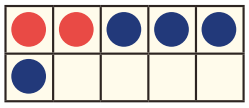
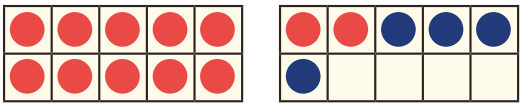
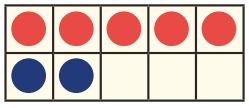
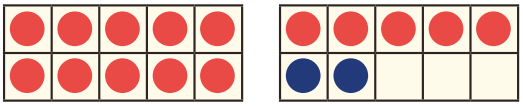
DAG 4 • DAY 4

Die getalle tot 20
Numbers up to 20

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Tel die blou en rooi kolle op.
Add the blue and red dots.

work from left to right across rows so that learners can see the patterns

 3 + 2 = 5	 13 + 2 = 15
 1 + 6 = 7	 11 + 6 = 17
 4 + 5 = 9	 14 + 5 = 19
 6 + 2 = 8	 16 + 2 = 18
 7 + 3 = 10	 17 + 3 = 20
 2 + 4 = 6	 12 + 4 = 16
 5 + 2 = 7	 15 + 2 = 17

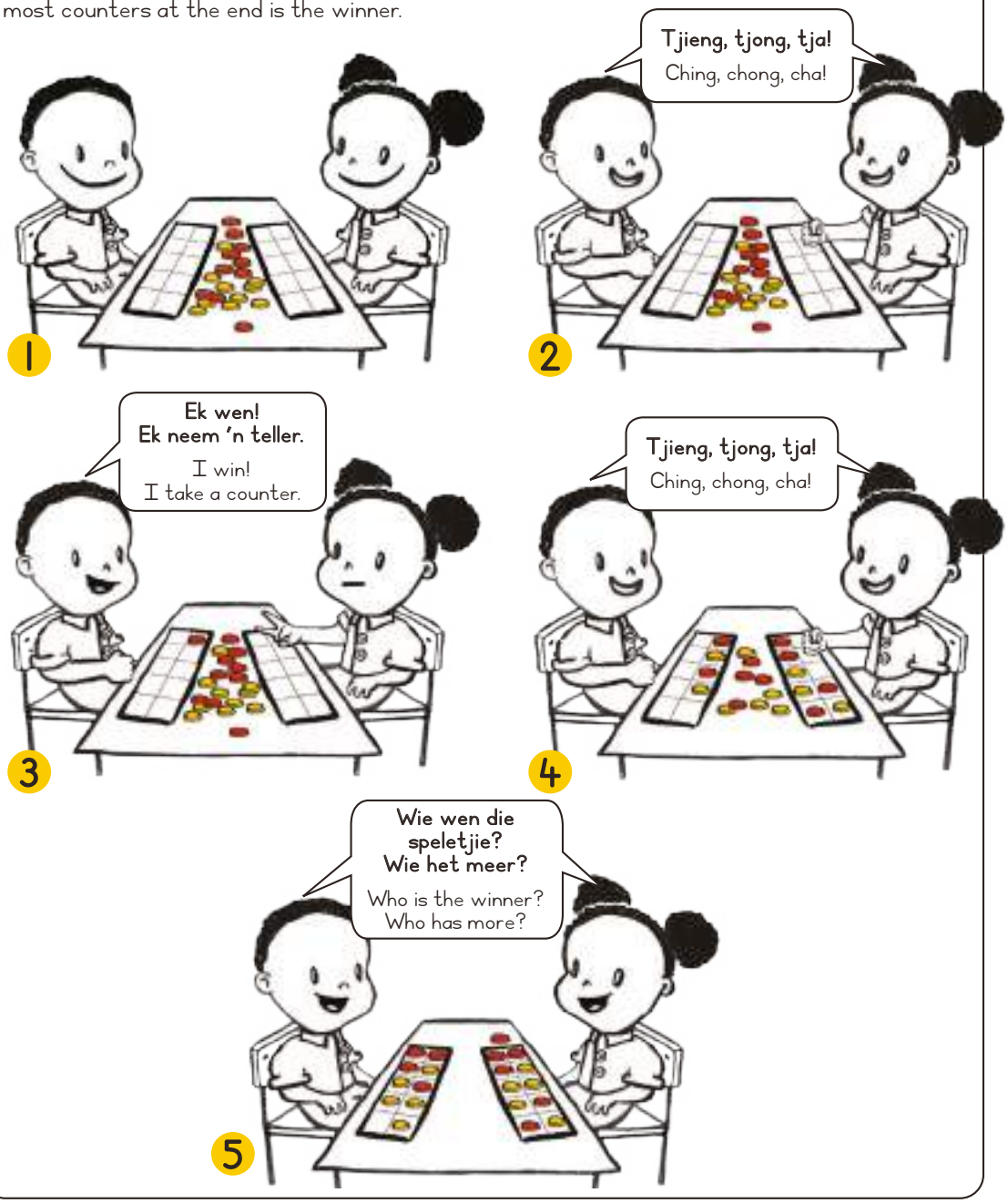
Numbers up to 20

This game is like 'Rock, Paper, Scissors'

Speletjie: Tjieng, tjong, tja!
Game: Ching, chong, cha!

Begin die speletjie met 20 tellers. As jy wen, neem jy een teller. Die leerder met die meeste tellers aan die einde is die wenner.

Start the game with 20 counters. If you win a draw, take a counter. The learner with the most counters at the end is the winner.



WEEK 1 • DAG 5

Assessering en vaslegging

WEEK • WEEK 1

DAG 5 • DAY 5

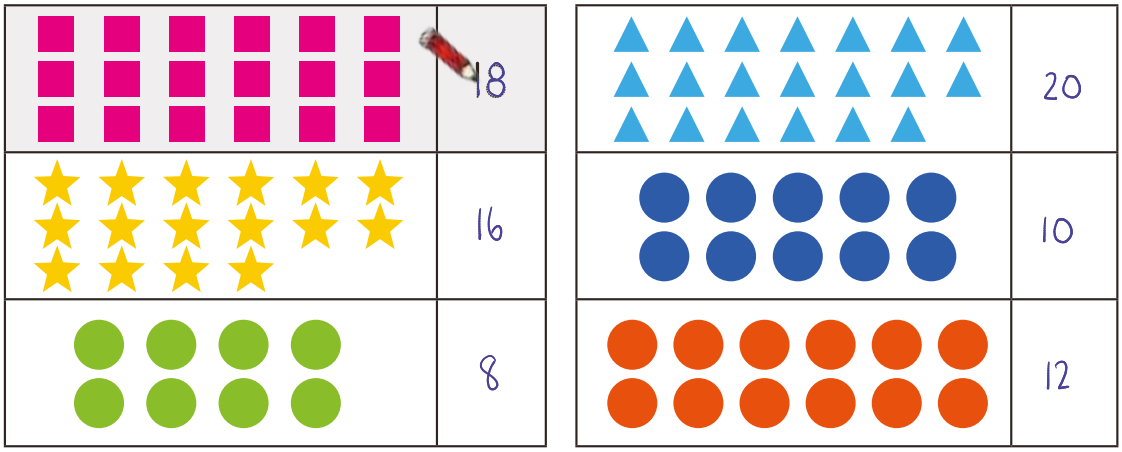
Vaslegging
Consolidation

HOOFREKENE / MENTAL MATHS → ASSESSERING / ASSESSMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

1 Hoeveel vorms is daar?

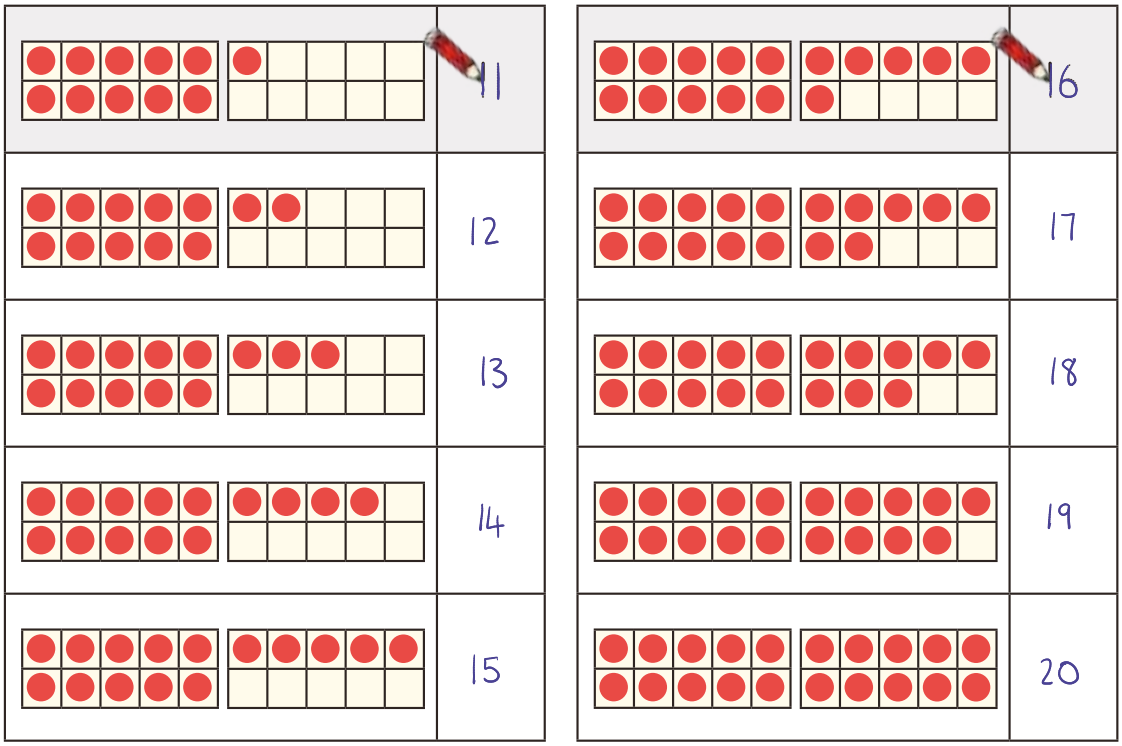
How many shapes?

Get learners to count in multiples of 2, 3 or 5

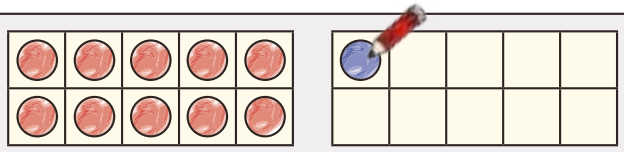
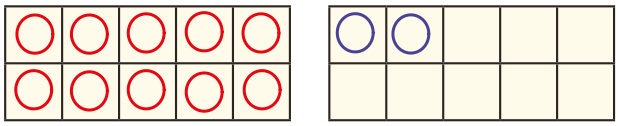
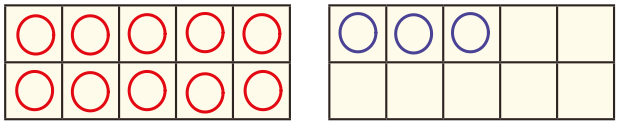
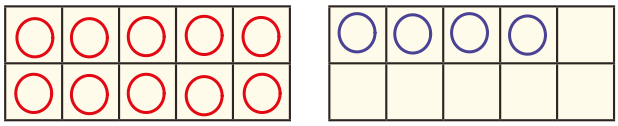
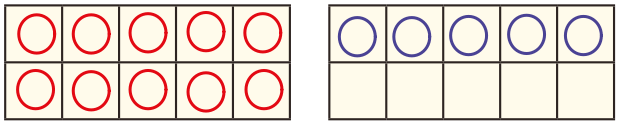
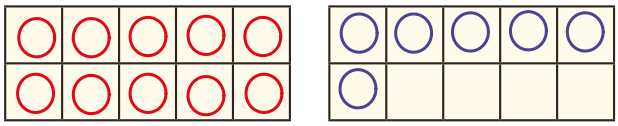
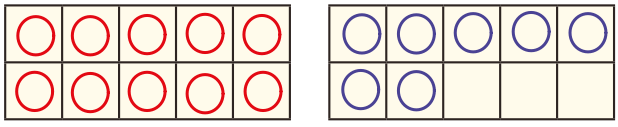
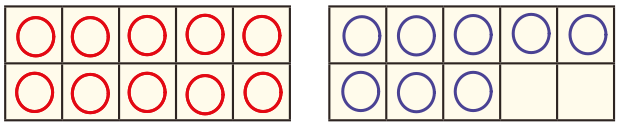
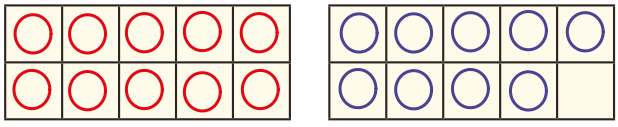
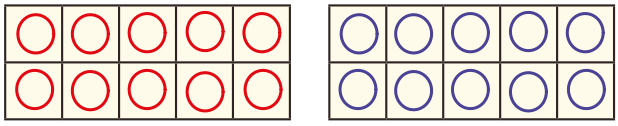


2 Hoeveel is daar?

How many?



3 Hoeveel is daar? Teken die kolle.
How many? Draw the dots.

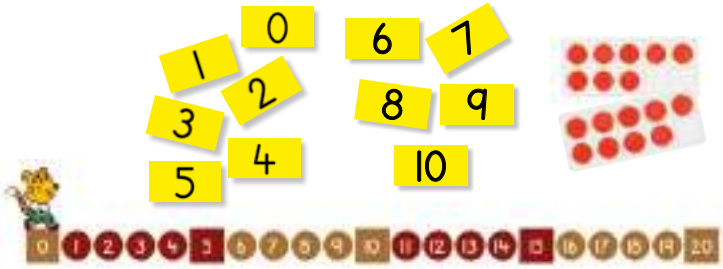
10 + 1 = 11	
10 + 2 = 12	
10 + 3 = 13	
10 + 4 = 14	
10 + 5 = 15	
10 + 6 = 16	
10 + 7 = 17	
10 + 8 = 18	
10 + 9 = 19	
10 + 10 = 20	

Vergelyk, tel op en trek af tot 20

	Hulpbronne
Hoofrekene: Getalkombinasies van 10 met behulp van getalkaarte	getalkombinasieflitskaarte, leerders se getalkaarte 0–10
Speletjie: Raai my getal	leerders se getalkaarte 0–10







Dag	Lesaktiwiteit	Leshulpbronne
1	Vergelyk en orden die getalle 0 tot 20	LB, getallebaan (onderwyser)
2	Optelling tot 20	LB, getallebaan (onderwyser), tienrame, tellers
3	Aftrekking tot 20	LB, getallebaan (onderwyser), tienrame, tellers
4	Nog optelling en aftrekking tot 20	LB, tienrame, tellers
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Die getalle 0 tot 20 te **vergelyk**, te **orden** en **in volgorde te plaas**	
Data in 'n **piktogram** te organiseer om getalle te kan vergelyk	
Die getalle van 0 tot 20 **op te tel** en **af te trek**	

Formele assessering (verwys na die Assesseringsboek)

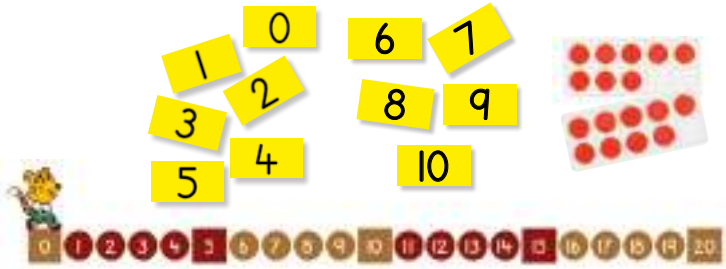
Skriftelike assessering: Getalle, Bewerkings en Verwantskappe – Optellings- en aftrekkingsgetalsinne

Compare, add and subtract up to 20

	Resources
Mental Maths: Bonds of 10 using number cards	number bond flash cards, learner number cards 0–10
Game: Guess my number	learner number cards







Day	Lesson activity	Lesson resources
1	Compare and order numbers 0 to 20	LB, number track (teacher)
2	Addition up to 20	LB, number track (teacher), ten frames, counters
3	Subtraction up to 20	LB, number track (teacher), ten frames, counters
4	More addition and subtraction up to 20	LB, ten frames, counters
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Compare, **order** and **sequence** numbers 0 to 20	
Organise data in a **pictograph** in order to compare numbers	
Add and **subtract** numbers from 0 to 20	

Formal assessment (see the Assessment Booklet)

Written assessment: Numbers, Operations and Relationships – Addition and subtraction number sentences

Vergelyk, tel op en trek af tot 20

Hoofrekene

Ons konsentreer hierdie week op die getalkombinasies van 10 en wys die samevoeging van getalkombinasies met behulp van ons getalkaarte. Dis ’n goeie manier om die leerders aktief by die les te betrek en bied jou ook ’n maklike manier om te sien of hulle hul getalkombinasies ken. Deur jou oog vinnig oor die klas te gooi, kan jy sien watter leerders die korrekte kaart in die lug hou. Jy kan dan die leerders help wat steeds met getalkombinasies van 10 sukkel.



Speletjie

Raai my getal



Konsepontwikkeling

Ons konsentreer hierdie week op die **optelling** en **aftrekking** van die getalle tot 20. Ons konsentreer ook daarop om die getalle te **vergelyk**. Die leerders moet die getalle kan **vergelyk** en **orden** en die getalle in die getalgebied van 0 tot 20 moet kan herken. Ons konsentreer daarop om:



- die getalle van 0 tot 20 te **vergelyk** en te **orden**.
- die getalle tot 20 met behulp van tellers en tienrame **op te tel** en **af te trek** (sonder om oor te dra).
- tienrame en tellers te gebruik ten einde die leerders se begrip van **plekwaarde** (tiene en ene) vas te lê.

Waarna jy hierdie week moet oplet

- Maak seker dat die leerders die woordeskat self gebruik om sodoende die taal van wiskunde aan te leer en hul begrip van hierdie konsepte (**tiene**, **ene**, **meer**, **minder**, **tel op**, **staan voor**, **staan na**, **staan tussen**, **trek af**, **meer as** en **minder as**) te verbeter.
- **Plekwaarde** is ’n sleutelkonsep wat gedurende hierdie week ontwikkel word namate die leerders begin besef dat hulle nie elke item hoef te tel om by die oplossings vir die probleem uit te kom nie. Die leerders moet die volgemaakte tienraam as ’n geheel raaksien en besef dat hulle probleme kan oplos sonder om die getal in die tiene-plek te verander. Probleemoplossing word sodoende makliker.

Compare, add and subtract up to 20

Mental Maths

We focus on the bonds of 10 this week and use our number cards to show the number bond combinations. This is a good way to keep learners actively involved in the lesson, and also provides an easy way for you to see if they know their bonds. A quick glance around the classroom will allow you to see which learners are holding up the correct card. You can then help learners who are still struggling with bonds of 10.



Game

Guess my number



Concept development

This week we focus on the **addition** and **subtraction** of numbers from 0–20. Another focus is **comparison** of numbers. Learners must be able to **compare** and **order** numbers and to recognise numbers in the range 0 to 20. We will focus on:



- **comparing** and **ordering** numbers from 0–20.
- **adding** and **subtracting** numbers up to 20 (without carrying) using counters and ten frames.
- using ten frames and counters to reinforce learners' understanding of **place value** (tens and ones).

What to look out for this week

- Ensure that learners use the vocabulary themselves in order to learn the language of mathematics and to better their understanding of this concept (**tens**, **ones**, **more**, **less**, **and**, **add**, **comes before**, **comes after**, **in between**, **subtract**, **more than**, **less than**).
- **Place value** is a key concept developed this week as learners begin to realise that they do not need to count every item in order to determine the solutions to the problems. Learners need to see the full ten frame as a whole and realise that they can solve problems without changing the number in the tens place. In this way, solving problems becomes easier.

WEEK 2 • DAG 1

Vergelyk en orden die getalle 0 tot 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Oefen die getalkombinasies van 10 met behulp van jul getalkombinasieflitskaarte.

Practise bonds of 10 using your number bond flash cards.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.









Compare and order numbers 0 to 20

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT









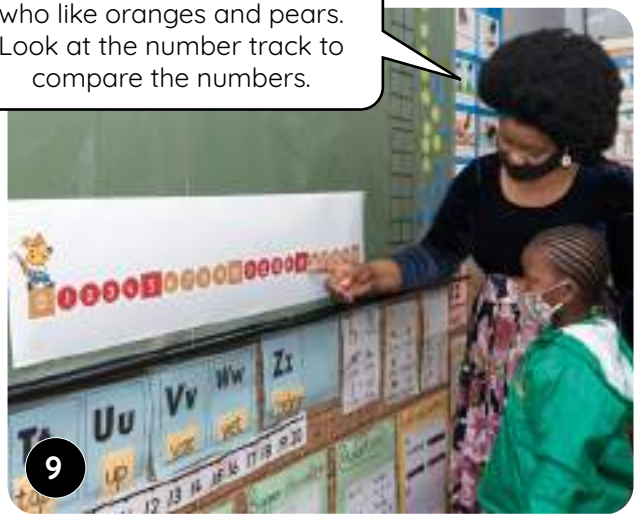




Vergelyk en orden die getalle 0 tot 20









Gaan voort om getalle met behulp van die grafiek en getallebaan te vergelyk deur vrae te stel soos:

- **Hoeveel mense hou van piesangs/appels/pere/lemoene?**
- **Van watter vrug hou mense die meeste/die minste?**
- **Vergelyk die aantal mense wat van piesangs en appels hou, en so meer.**

Maak seker dat die leerders weet hoe om die getallebaan te gebruik om na getalle te soek en dit te vergelyk.

Continue comparing numbers using the graph and number track by asking questions such as:

- How many people like bananas/apples/pears/oranges?
- Which fruit do people like least/most?
- Compare the number of people who like bananas and apples and so on.

Make sure the learners know how to use the number track to look for numbers and compare them.

Compare and order numbers 0 to 20

WEEK • WEEK 2

DAG 1 • DAY 1

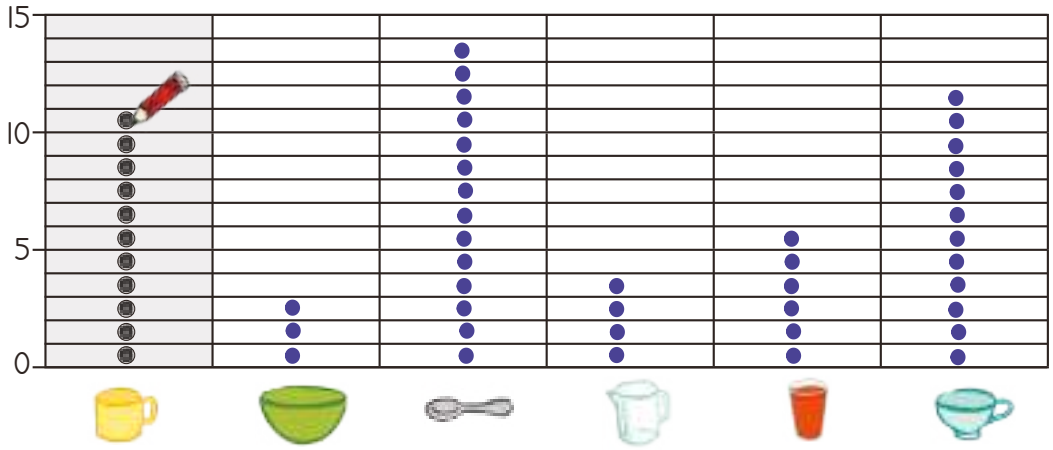
Vergelyk en orden die getalle 0 tot 20
Compare and order numbers 0 to 20

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Daar kom baie goed in die kombuis voor.
There are lots of things in the kitchen.

14	11	12	3	4	6

Teken kolle om die getal van elke ding in die kombuis te wys.
Draw dots to show the number of each thing in the kitchen.



2 Hoeveel goed is daar altesaam?
How many things are there altogether?

4 + 14 = 18	14 + 6 = 20
6 + 11 = 17	3 + 14 = 17
12 + 3 = 15	4 + 11 = 15

Vergelyk en orden die getalle 0 tot 20



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

3 Skryf die getalle neer.

Write the numbers.

staan na comes after	
16	17
15	16
13	14
19	20

staan voor comes before	
19	20
11	12
17	18
15	16

staan tussen comes between		
12	13	14
17	18	19
9	10	11
15	16	17

4 Omkring die getalle.

Circle the numbers.

groter bigger	
11	6
18	8
9	11
6	16
15	9
11	20
15	10

kleiner smaller	
13	5
18	20
7	6
8	18
13	3
2	20
9	11

dieselfde as the same as		
20	11	20
7	7	12
12	13	13
8	10	8
9	9	18
6	16	6
14	4	4

Addition up to 20

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT



Los die probleem 14 + 2 met behulp van jul tienrame en tellers op.
Solve the problem 14 + 2 using your ten frames and counters.



Ons wys 14 soos volg op die tienrame.
We show 14 on the ten frames like this.

As ons 2 moet bytel, moet ons 2 tellers meer by die tienraam insit.
If we have to add on 2, then we must put 2 more counters on the ten frame.



Daar is altesaam 16 tellers.
There are 16 counters altogether.



Hoe het julle geweet dat daar altesaam 16 tellers is?
How did you know that there are 16 counters altogether?



Daar is 10 tellers in die een tienraam en 6 tellers in die ander tienraam.
There are 10 counters on one ten frame and 6 counters on the other ten frame.

Hoe het julle geweet dat daar 10 tellers in hierdie tienraam is? Het julle al die tellers moes tel?
How did you know that there were 10 counters on this ten frame? Did you have to count them all?



Nee, ek hoef dit nie te getel het nie. Ek kon sien dat die tienraam vol is, dus het ek geweet dat daar 10 tellers daarin is.
No, I didn't have to count them. I could see that the ten frame is full, so I know that there are 10 counters on it.

Herhaal die stappe met ander optellingsprobleme soos:

Repeat with other addition problems, such as:

- **15 + 4**
- **11 + 6**
- **13 + 3**

Wys die leerders dat hulle ook 'n getallebaan kan gebruik om by die antwoorde uit te kom.

Show learners that they could also use a number track to find the answers.

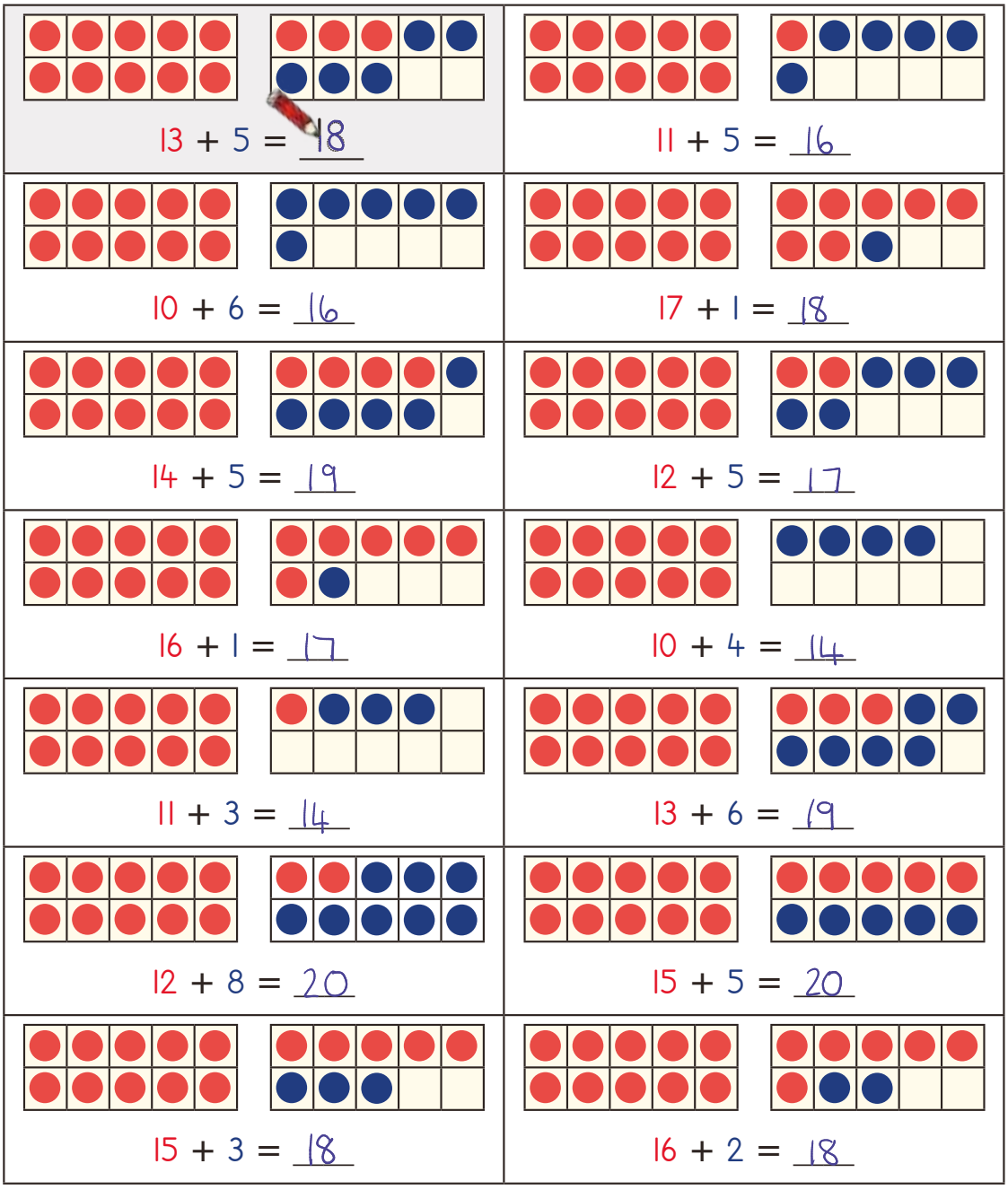
WEEK • WEEK 2

DAG 2 • DAY 2

Optelling tot 20
Addition up to 20

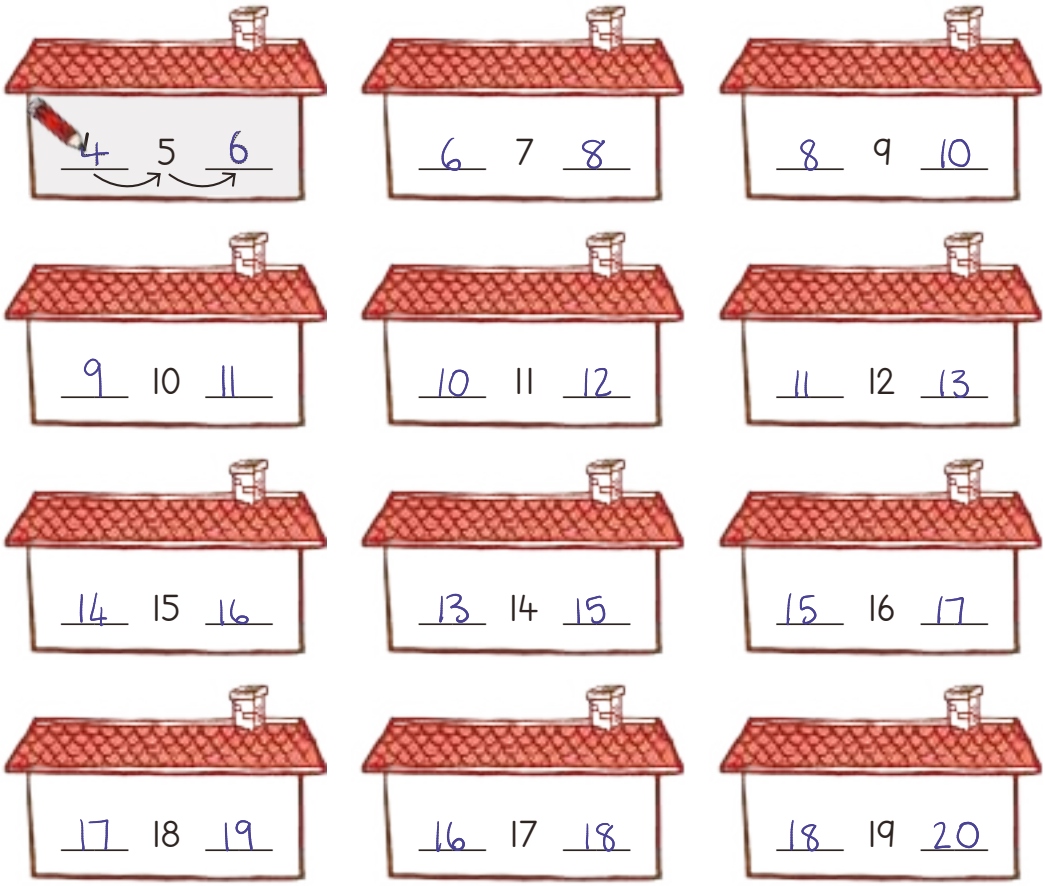
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Tel die blou en rooi kolle bymekaar.
Add the blue and red dots.



Addition up to 20

2 Skryf die getalle neer wat **voor** en **na** die gegewe getalle staan.
Write the numbers that come **before** and **after**.





0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

3 Tel op.
Add.

17 + 2 = 19
17 + 3 = 20
16 + 3 = 19
17 + 0 = 17

10 + 8 = 18
15 + 3 = 18
17 + 1 = 18
15 + 4 = 19

WEEK 2 • DAG 3

Aftrekking tot 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Los die probleem 17 – 4 met behulp van jul tienrame en tellers op.
Solve the problem 17 – 4 using your ten frames and counters.



Ons wys 17 soos volg op die tienrame.
We show 17 on the ten frames like this.



As ons 4 tellers moet wegneem, moet ons 4 tellers uit een tienraam uithaal.
If we have to take away 4, then we must move 4 counters off one ten frame.



Daar bly 13 tellers oor.
There are 13 counters left.



Hoe het julle geweet dat daar 13 tellers oorgebly het?
How did you know that there were 13 counters left?



Daar is 10 tellers in die een tienraam en 3 tellers wat in die ander tienraam oorbly.
There are 10 counters on one ten frame and 3 counters left on the other ten frame.

Hoe het julle geweet dat daar 10 tellers in hierdie tienraam was? Moes julle al die tellers tel?
How did you know that there were 10 counters on this ten frame? Did you have to count them all?



Nee, ek hoef dit nie te getel het nie. Ek kon sien dat die tienraam vol was, dus het ek geweet dat daar 10 tellers daarin is.
No, I didn't have to count them. I could see that the ten frame is full, so I know that there are 10 counters on it.

Herhaal die stappe met ander aftrekkingsprobleme soos:

Repeat with other subtraction problems, such as:

- **19 – 3**
- **15 – 2**
- **18 – 5**

Wys die leerders dat hulle ook 'n getallebaan kan gebruik om by die antwoorde uit te kom.

Show learners that they can also use a number track to find the answers.

Subtraction up to 20

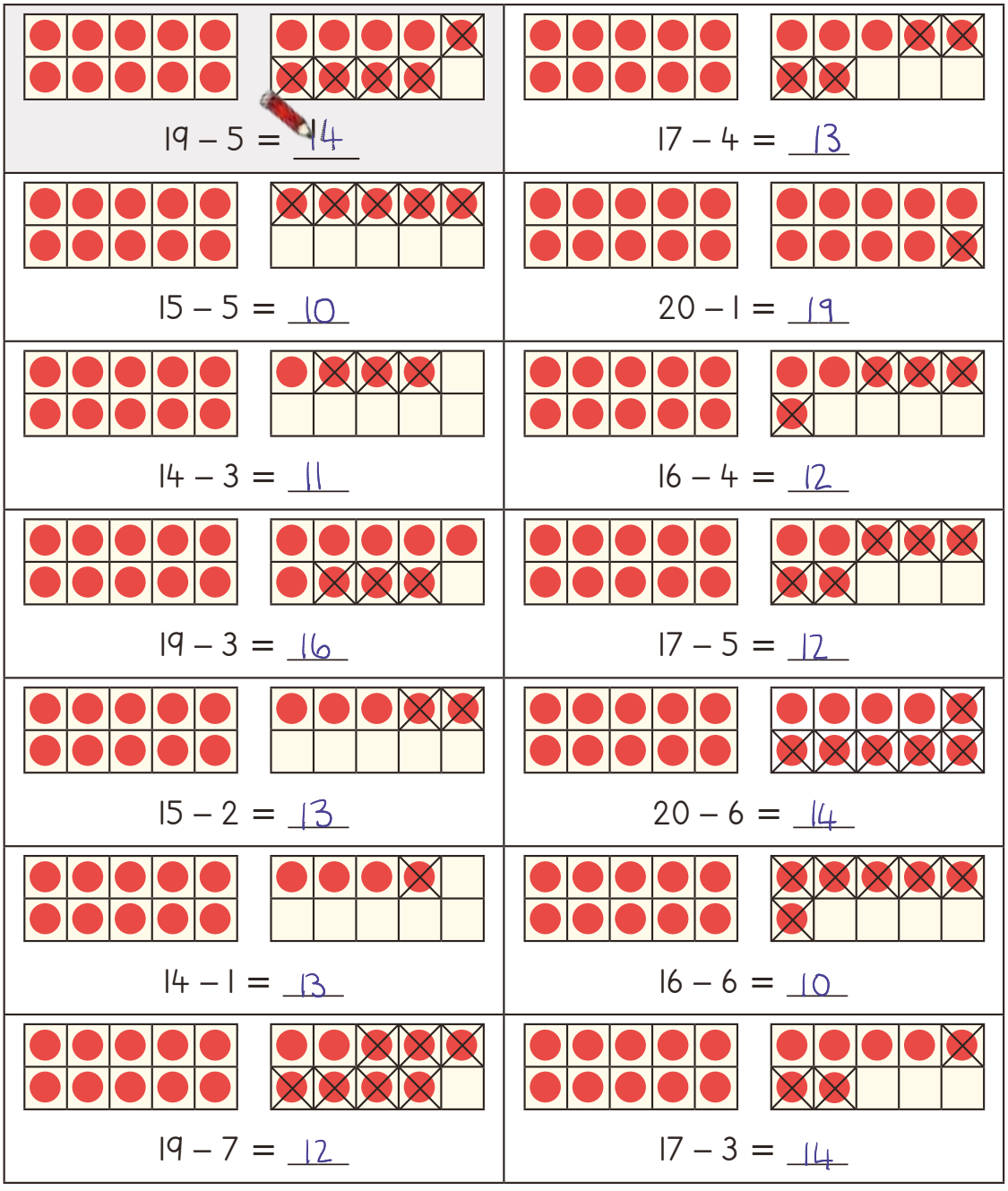
WEEK • WEEK 2

DAG 3 • DAY 3

Aftrekking tot 20
Subtraction up to 20

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Trek die kolle met behulp van die tienrame af.
Use the ten frames to subtract the dots.



19 – 5 = 14	17 – 4 = 13
15 – 5 = 10	20 – 1 = 19
14 – 3 = 11	16 – 4 = 12
19 – 3 = 16	17 – 5 = 12
15 – 2 = 13	20 – 6 = 14
14 – 1 = 13	16 – 6 = 10
19 – 7 = 12	17 – 3 = 14

Aftrekking tot 20

2 Skryf die getalle neer wat **voor** en **na** die gegewe getal staan.
Write the numbers that come **before** and **after**.

1 2 3	7 8 9	3 4 5
8 9 10	12 13 14	18 19 20
10 11 12	17 18 19	9 10 11
6 7 8	16 17 18	14 15 16



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

3 Los hierdie aftrekkingsprobleme op.
Solve these subtraction problems.

17 – 2 = 15

16 – 2 = 14

18 – 3 = 15

17 – 4 = 13

16 – 4 = 12

18 – 5 = 13

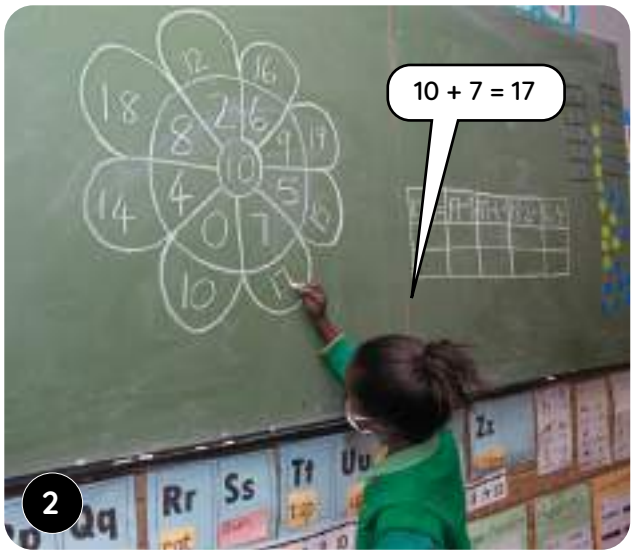
More addition and subtraction up to 20

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons soek na die ontbrekende getalle deur op te tel.
Let's find the missing numbers by adding.



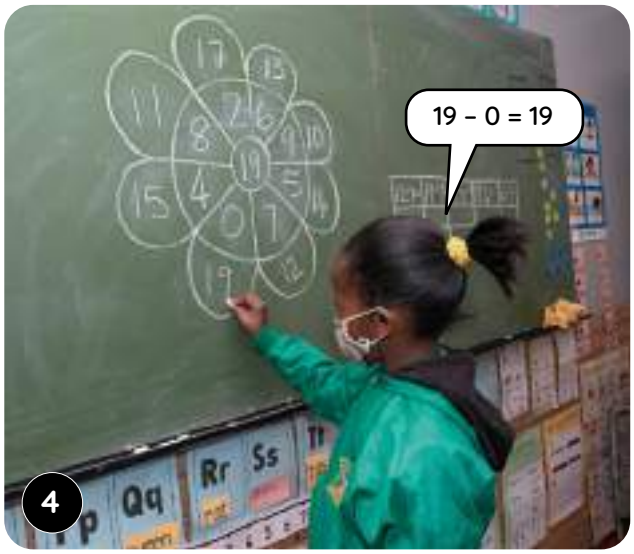


Gaan hiermee voort deur verskillende leerders na vore te roep totdat daar getalle op al die blomblare ingeskryf is. Doen dieselfde met die aftrekkingsblomme wat hierna volg.

Continue calling different learners to come to the front of the class until all of the petals of the flowers are filled. Do the same with the subtraction flowers that follow.

Kom ons soek na die ontbrekende getalle deur af te trek.
Let's find the missing numbers by subtracting.





WEEK 2 • DAG 4

Nog optelling en aftrekking tot 20



5

Kom ons los hierdie probleem op! Ons moet die antwoorde van die kleinste tot die grootste skryf.

Let's solve this problem! We must write the answers from smallest to biggest.

Bereken die antwoord op elke getalsin en skryf die antwoorde in die tweede ry neer. Werk dan saam met die klas om die getalle van die kleinste tot die grootste te sorteer. Watter woord word gevorm? Sit tyd opsy sodat die klas die probleme kan oplos en by die antwoorde uitkom.

Learners must calculate the answer to each number sentence and write the answers in the second row. Then work with the class to sort them from smallest to biggest. What is the word? Take time to allow the class to solve and find the answers.



6

Ons kom by die woord 'apile' uit.

We found the word 'apile'.

Verduidelik aan die klas dat hulle vandag nog aktiwiteite soos hierdie een gaan doen en dan 'n speletjie gaan speel. Onthou om die speletjie aan die leerders te verduidelik voordat hulle dit speel. Jy kan 'n sleutel vir enige woord in enige taal uitdink en die leerders aanmoedig om ook hul eie legkaarte uit te dink.

Explain to the class that today they will do more activities like this one and then they will play a game. Remember to explain the game to the learners before they play it. You can make up a key to words in any language and encourage learners to make up puzzles of their own as well.

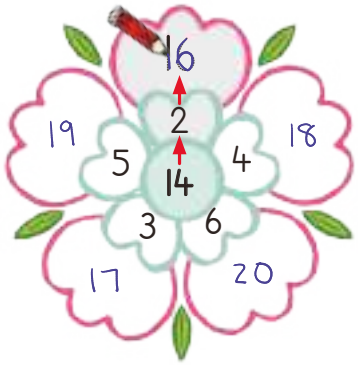
More addition and subtraction up to 20

WEEK • WEEK 2

DAG 4 • DAY 4

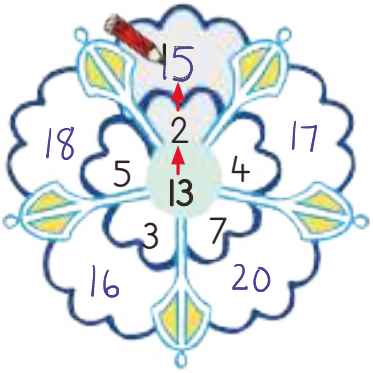
Nog optelling en aftrekking tot 20
More addition and subtraction up to 20

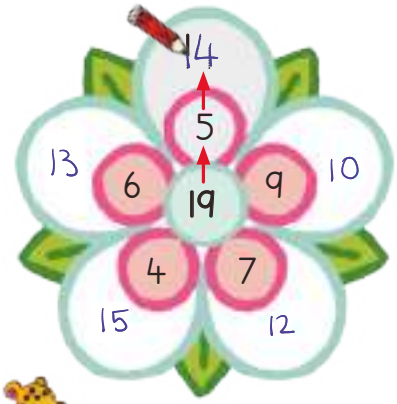
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING



1 Tel op.
Add.

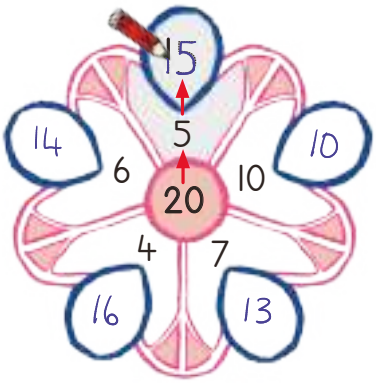
Let the class answer orally before doing this task in their books





2 Trek af.
Subtract.

Highlight the change of operation to subtraction





0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

3 Los die optelling- en aftrekkingsprobleme op.
Solve the addition and subtraction problems.

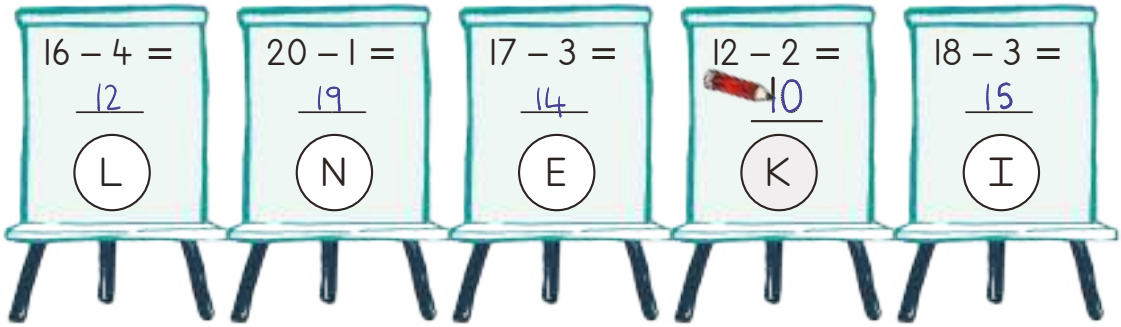
10 + 7 = 17	17 – 4 = 13	12 + 3 = 15
16 + 1 = 17	17 – 6 = 11	14 + 2 = 16
15 + 2 = 17	16 – 3 = 13	13 + 3 = 16
14 + 3 = 17	16 – 6 = 10	15 + 1 = 16

Nog optelling en aftrekking tot 20

4 Los die aftrekkingsprobleme op.
Solve the subtraction problems.

20 – 3 = 17	20 – 6 = 14	14 – 4 = 10
20 – 2 = 18	20 – 7 = 13	18 – 8 = 10
20 – 4 = 16	20 – 5 = 15	13 – 3 = 10

5 Skryf die antwoorde van die **kleinste** tot die **grootste** neer.
Write the answers from the **smallest** to the **largest**.



K L E I N

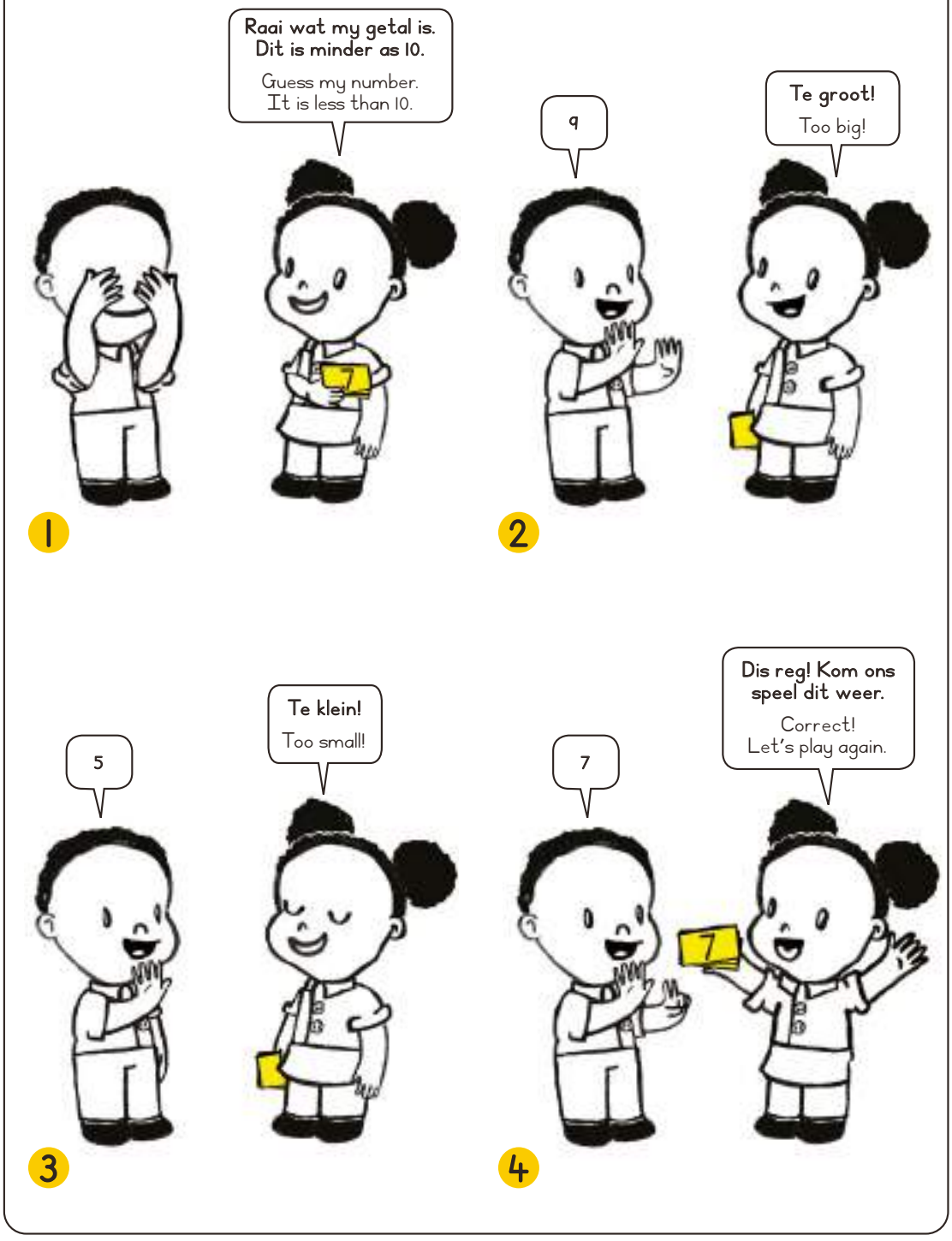
6 Skryf die antwoorde van die **grootste** tot die **kleinste** neer.
Write the answers from the **largest** to the **smallest**.



G R O O T

More addition and subtraction up to 20

Speletjie: Raai my getal
Game: Guess my number



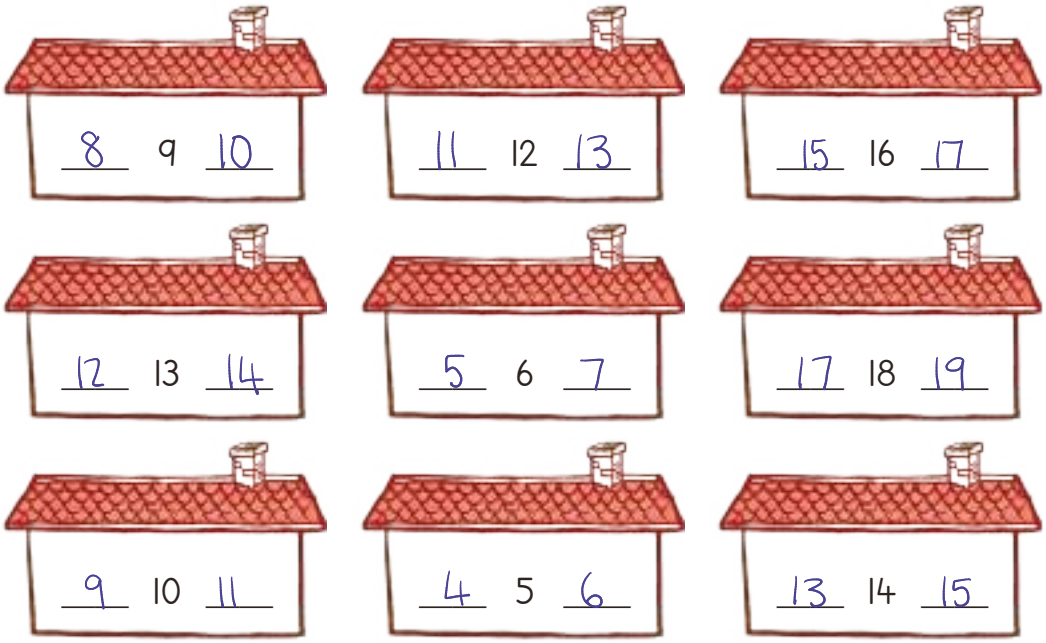
WEEK • WEEK 2

DAG 5 • DAY 5

Vaslegging
Consolidation

HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Skryf die getalle neer wat **voor** en **na** die gegewe getal staan.
Write the numbers that come **before** and **after**.



2 Skryf die getalle neer.
Write the numbers.

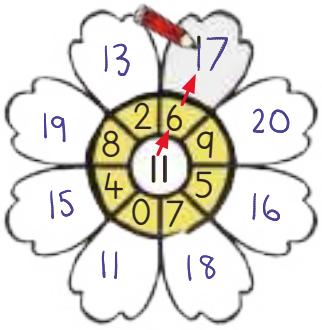
staan voor comes before	
4	5
8	9
13	14
16	17
10	11
17	18

staan na comes after	
7	8
10	11
16	17
20	21
13	14
17	18

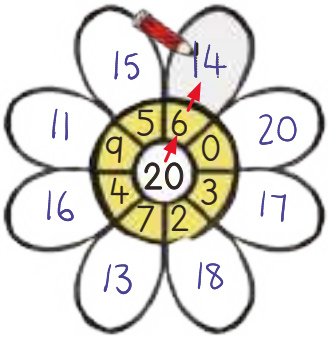
staan tussen comes between		
6	7	8
17	18	19
13	14	15
9	10	11
18	19	20
16	17	18

Assessment and consolidation

3 Tel op om die probleme op te los.
Add to solve the problems.



Trek af om die probleme op te los.
Subtract to solve the problems.





0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

4 Los hierdie optellings- en aftrekkingsprobleme op.
Solve these addition and subtraction problems.

10 + 7 = 17	12 + 7 = 19	19 – 1 = 18
10 + 9 = 19	13 + 5 = 18	19 – 4 = 15
10 + 8 = 18	14 + 5 = 19	19 – 3 = 16
10 + 10 = 20	15 + 4 = 19	19 – 5 = 14

5 Los die probleme op en skryf die letters in die onderste vierkante neer om die woord te kry.
Solve the problems and write the letters in the squares below to find the word.

11 + 3 = 14	E	15 – 5 = 10	A
11 + 6 = 17	I	18 – 5 = 13	R
12 + 3 = 15	K	17 – 5 = 12	T
12 + 4 = 16	K	19 – 8 = 11	F
13 + 5 = 18	N	20 – 1 = 19	G

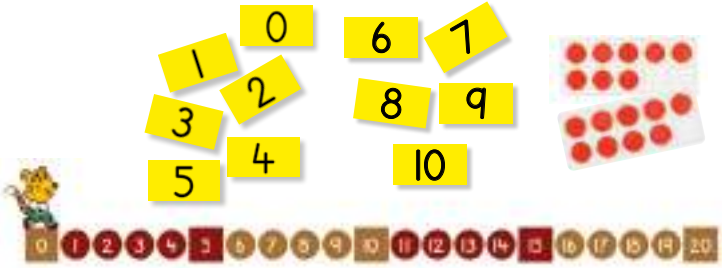
10	11	12	13	14	15	16	17	18	19
A	F	T	R	E	K	K	I	N	G

Optelling- en aftrekkingsprobleme

	Hulpbronne
Hoofrekene: 1, 2, 3, wys! – optelling (een hand)	geen
Speletjie: 1, 2, 3, wys! – optelling	leerders se getalkaarte







Dag	Lesaktiwiteit	Leshulpbronne
1	Optellingswoordprobleme	LB, tellers, tienrame
2	Aftrekkingswoordprobleme	LB, tellers, tienrame
3	Die optelling en aftrekking van 3 getalle	LB, getallebaan (onderwyser), tellers, tienrame
4	Gemengde bewerkings	LB, getallebaan (onderwyser), tellers, tienrame
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Optellingswoordprobleme met die getalle 0 tot 20 op te los	
Aftrekkingswoordprobleme met die getalle 0 tot 20 op te los	
3 Getalle **op te tel** en **af te trek**	
Probleme met 3 getalle en gemengde bewerkings van optelling en aftrekking op te los	

Formele assessering (verwys na die Assesseringsboek)

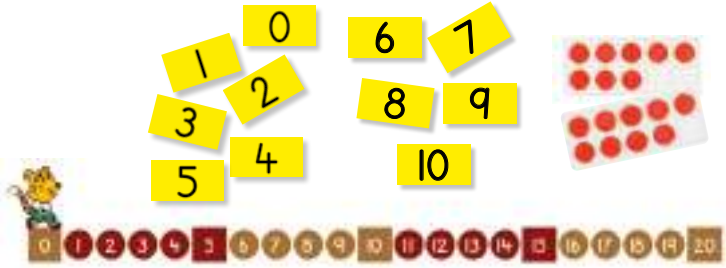
Skriftelike assessering: Getalle, Bewerkings en Verwantskappe – Getalsinne en woordprobleme

Addition and subtraction problems

	Resources
Mental Maths: 1, 2, 3, show! – addition (one hand)	none
Game: 1, 2, 3, show! – addition	learner number cards







Day	Lesson activity	Lesson resources
1	Addition word problems	LB, counters, ten frames
2	Subtraction word problems	LB, counters, ten frames
3	Addition and subtraction of 3 numbers	LB, number track (teacher), counters, ten frames
4	Mixed operations	LB, number track (teacher), counters, ten frames
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Solve **addition word problems** with numbers 0 to 20	
Solve **subtraction word problems** with numbers 0 to 20	
Add and **subtract** 3 numbers	
Solve problems using 3 numbers and mixed operations of addition and subtraction	

Formal assessment (see the Assessment Booklet)

Written assessment: Numbers, Operations and Relationships – Number sentences and word problems

Optelling- en aftrekkingsprobleme

Hoofrekene

Ons konsentreer hierdie week op die getalkombinasies van 10 en wys die samevoeging van **getalkombinasies** op ons vingers. Die leerders kan aktief by die les betrek word en dit help hulle om eenvoudige optellingsprobleme vinnig en doeltreffend op te los. Dit help hulle ook om in 'n later stadium hul getalfeite te kan herroep.



Speletjie

1, 2, 3, wys! – optelling

Konsepontwikkeling

Ons konsentreer hierdie week op **optelling** en **aftrekking**. Die leerders los **optelling**- en **aftrekkingswoordprobleme** op voordat hulle leer om drie getalle op te tel en af te trek. Die leerders leer dan om **probleme in gemengde bewerkings** op te los. Terwyl ons met optelling en aftrekking werk, konsentreer ons daarop om:



- met behulp van 'n verskeidenheid woordprobleme getalle tot 20 op te tel en af te trek.
- probleme met behulp van tellers en tienrame op te los sodat die leerders begin om 'n begrip van **plekwaarde** te ontwikkel.
- 3 getalle op te tel en af te trek ter voorbereiding van die bekendstelling van **optelling met oordrag** en **aftrekking met leen.**
- probleme in gemengde bewerkings op te los deur 'n tien te maak deurdat 2 van die 3 getalle gekombineer word in die getalsin waarmee die leerders werk, ten einde die berekening van die oplossing van die probleem te vereenvoudig.

Waarna jy hierdie week moet oplet

- Maak seker dat die leerders die woordeskat self gebruik om sodoende die taal van wiskunde aan te leer en hul begrip van hierdie konsepte (**tel op/bymekaar**, **en**, **meer as, gelyk aan**, **trek af**, **neem weg**, **minder as**) te verbeter.
- Die leerders gaan gedurende hierdie week met probleme werk wat nie oordrag of leen behels nie, en dit is belangrik dat hulle hierdie soort berekeninge baie oefen voordat daar na die oorbrugging van 10 aanbeweeg word.
- Deurdat die leerders in staat gestel word om talle probleme met behulp van die tienrame en tellers op te los, begin hulle besef dat hulle nie hoef te tel om probleme op te los nie. Deur die tienrame te gebruik, begin hulle meer doeltreffend werk (deurdat hulle **getalkombinasies** gebruik), ter voorbereiding van toekomstige probleme wat **oordrag** en **leen** insluit.

Addition and subtraction problems

Mental Maths

We focus on the bonds of 10 this week and use our fingers to show the **number bond combinations**. Learners can be actively involved in the lesson which will help them solve simple addition problems quickly and efficiently. It will also help them recall their number facts at a later stage.



Game

1, 2, 3, show! – addition

Concept development

This week we focus on **addition** and **subtraction**. Learners will solve **addition** and **subtraction word problems** before learning to add and subtract three numbers. Learners will then learn to solve **mixed operation problems**. In our work on addition and subtraction, we will focus on:



- adding and subtracting with numbers up to 20 using a variety of word problems.
- solving problems by using counters and ten frames so as to begin to develop an understanding of **place value**.
- adding and subtracting 3 numbers, in preparation for the introduction of **addition with carrying** and **subtraction with borrowing**.
- solving mixed operation problems by making a ten by combining 2 of the 3 numbers in the number sentences they work with, in order to simplify the calculation of the solution to the problem.

What to look out for this week

- Ensure that learners use the vocabulary themselves in order to learn the language of mathematics and to better their understanding of this concept (**add**, **and**, **more than**, **equals**, **subtract**, **take away**, **less than**).
- This week learners will work with problems that do not involve carrying or borrowing, and it is important that they have a lot of practice with this type of calculation before moving on to bridging 10.
- By allowing learners to solve many problems using ten frames and counters, they begin to realise that they do not need to count to solve problems. By using the ten frames, they begin to work more efficiently (using **number bonds**), in preparation for future problems that will involve **carrying** and **borrowing**.

Optellingswoordprobleme

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

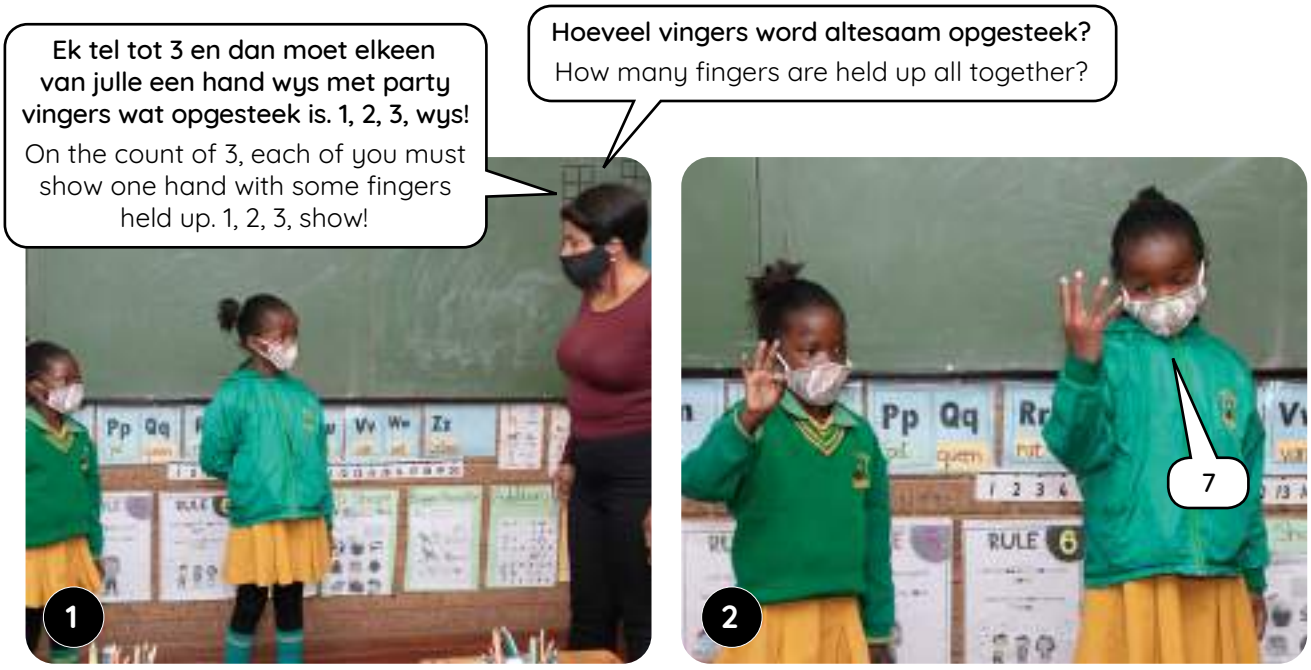
HOOFREKENE | MENTAL MATHS

Speel die speletjie, 1, 2, 3, wys! – optelling.

Play the 1, 2, 3, show! – addition game.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.





Addition word problems

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

**Sewela het 15 lekkers.
Tumelo gee haar 4 lekkers meer.
Hoeveel lekkers het Sewela altesaam?**

Sewela has 15 sweets.
Tumelo gives her 4 more sweets.
How many sweets does Sewela have altogether?



Wys met julle tellers hoeveel lekkers Sewela het.

Use your counters to show how many sweets Sewela has.

Sewela het 15 lekkers. Sy kry 4 lekkers meer by.

Sewela has 15 sweets. She gets 4 more sweets.



Dink julle ons moet optel of aftrek om by die antwoord op hierdie probleem uit te kom?

Do you think we need to add or subtract to find the answer to this problem?



Ek dink ons moet optel omdat Sewela meer lekkers bykry.

I think we need to add because Sewela is getting more sweets.

Los die probleem met behulp van jou tellers en tienrame op.

Solve the problem using your counters and ten frames.



Ek kan sien daar bly net een leë spasie op die tienrame oor. Ek weet dus dat 15 + 4 = 19.

I can see there is only one empty space left on the ten frames, so I know that 15 + 4 = 19.

Herhaal die stappe met ander optellingswoordprobleme, met optelling in die ene-plek. Die volgende is voorbeelde: 11 + 3; 14 + 2; 17 + 1, en so meer. Alhoewel die antwoorde in die getalgebied tot 20 voorkom, moet die vrae nie die oorbrugging van 10 behels nie – dit word later behandel. Die tweede aktiwiteit in die werkboek handel oor 'n piktogram. Herinner die leerders aan hoe hulle daarmee te werk moet gaan.

Repeat the steps with other addition word problems with addition in the ones place. For example: 11 + 3, 14 + 2, 17 + 1, and so on. Although the answers are in the range up to 20, the questions should not involve bridging 10 – this will be done later. The second activity in the workbook involves a pictograph. Remind learners how to work with it.

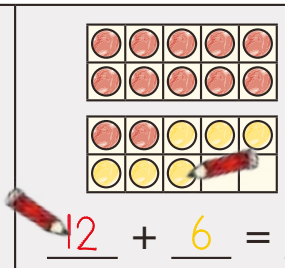
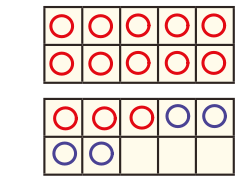
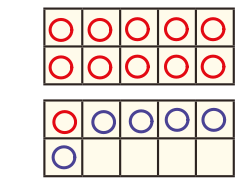
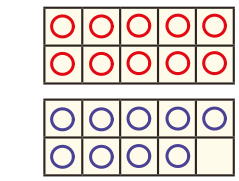
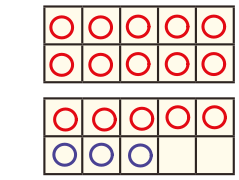
WEEK • WEEK 3

DAG 1 • DAY 1

Optellingswoordprobleme
Addition word problems

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

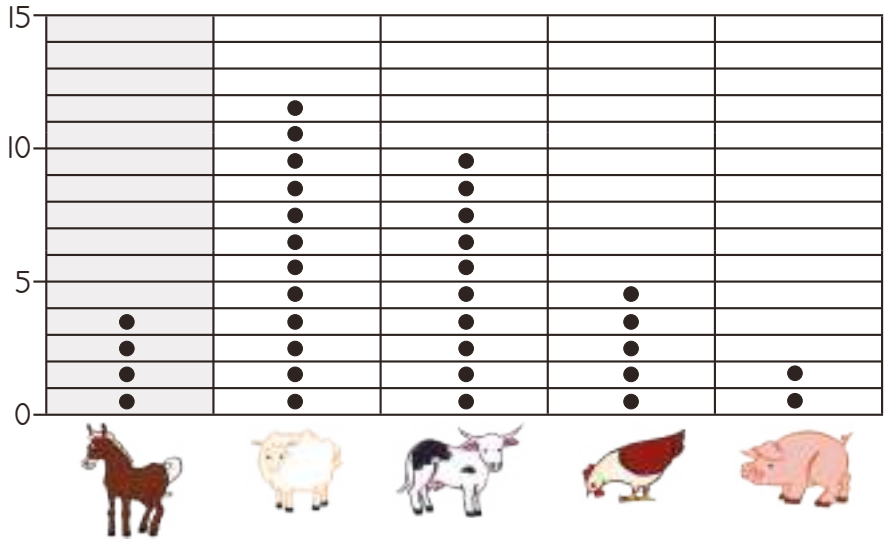
1 Los hierdie woordprobleme met behulp van die tienrame op.
Solve these word problems using the ten frames.

Ek het 12 ballonne. My maat het 6 ballonne meer as ek. Hoeveel ballonne het sy? I have 12 balloons. My friend has 6 more balloons than me. How many balloons does she have? 	 12 + 6 = 18
Nosisi het 13 groen albasters en 4 blou albasters. Hoeveel albasters het sy? Nosisi has 13 green marbles and 4 blue marbles. How many marbles does she have? 	 13 + 4 = 17
Ek het 11 appels. Khwezi het 5 appels meer as ek. Hoeveel appels het hy? I have 11 apples. Khwezi has 5 more apples than me. How many apples does he have? 	 11 + 5 = 16
Tumelo het 10 rooi lekkers en 9 blou lekkers. Hoeveel lekkers het sy altesaam? Tumelo has 10 red sweets and 9 blue sweets. How many sweets does she have altogether? 	 10 + 9 = 19
Ek het 15 potlode. My maat het 3 potlode meer as ek. Hoeveel potlode het hy? I have 15 pencils. My friend has 3 more pencils than me. How many pencils does he have? 	 15 + 3 = 18

Addition word problems

2 Ons maats

Our friends



Hoeveel van elke dier word op die grafiek gewys?

How many of each animal is shown on the graph?

4	12	10	5	2

3 Hoeveel is daar altesaam?

How many altogether?

4 + 5 = 9	12 + 4 = 16
4 + 2 = 6	12 + 2 = 14
10 + 5 = 15	10 + 2 = 12

WEEK 3 • DAG 2

Aftrekkingswoordprobleme

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Daar is 17 albasters in die sakkie. 3 van die albasters is rooi en die ander is groen. Hoeveel groen albasters is daar?

There are 17 marbles in the bag. 3 of them are red and the others are green. How many green marbles are there?

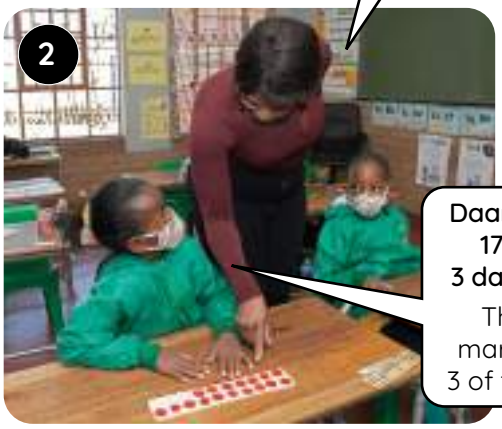
Wys met julle tellers hoeveel rooi albasters daar is.

Use your counters to show how many red marbles there are.

1



2



Daar is altesaam 17 albasters. 3 daarvan is rooi.

There are 17 marbles in total. 3 of them are red.

3



Dink julle ons moet optel of aftrek om by die antwoord op hierdie probleem uit te kom?

Do you think we need to add or subtract to find the answer to this problem?

Ek dink ons moet aftrek omdat ons die rooi albasters van die totale aantal albasters wegneem.

I think we need to subtract because we're taking away the red marbles from the total number of marbles.

4



Los die probleem met behulp van julle tellers en tienrame op.

Solve the problem using your counters and ten frames.

As ek 3 tellers wegneem, bly daar 4 tellers op die tweede tienraam oor. Dit beteken dat 17 – 3 = 14.

If I take away 3 counters, then there are 4 counters left on the second ten frame. That means that 17 – 3 = 14.

Herhaal die stappe met ander aftrekkingswoordprobleme, met stories wat as probleme gebruik word, soos 16 – 4; 12 – 2; 18 – 5; en so meer. In hierdie stadium moet die aftrekkingsprobleme nie 10 oorbrug nie. Die tweede aktiwiteit in die werkboek handel oor 'n piktogram. Herinner die leerders aan hoe hulle daarmee te werk moet gaan.

Repeat the steps with other subtraction word problems with stories for problems such as 16 – 4; 12 – 2; 18 – 5, and so on. At this stage, the subtraction problems should not bridge 10. The second activity in the workbook involves a pictograph. Remind learners how to work with it.

Subtraction word problems

WEEK • WEEK 3

DAG 2 • DAY 2

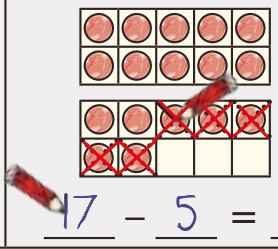
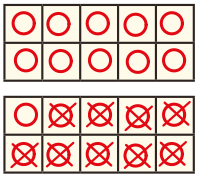
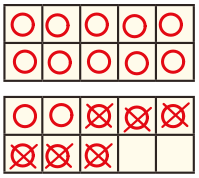
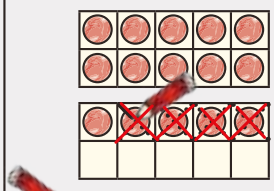
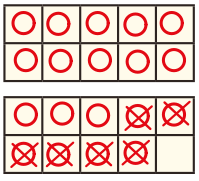
Aftrekkingswoordprobleme
Subtraction word problems

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Los die woordprobleme met behulp van die tienrame op.

Solve the word problems using the ten frames.

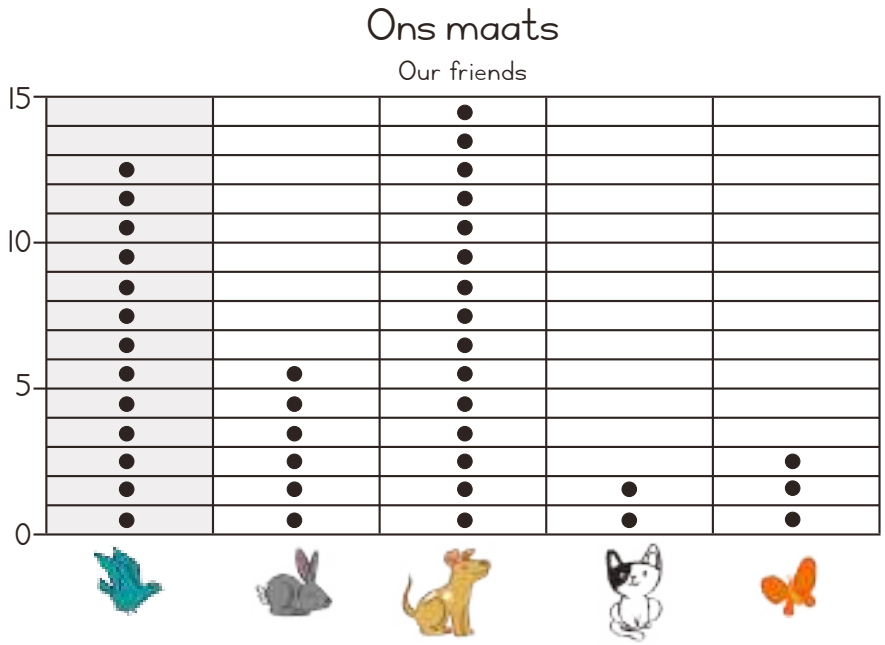
Read word problems aloud with the class

Daar sit 17 voëls op 'n tak. 5 voëls vlieg weg. Hoeveel voëls bly oor? There are 17 birds on the branch. 5 of them fly away. How many birds are left? 	 17 – 5 = 12
Daar is 20 skape op die plaas. 9 skape verdwaal. Hoeveel skape bly oor? There are 20 sheep on the farm. 9 of them get lost. How many sheep are left? 	 20 – 9 = 11
Daar is 18 sokkerballe in die sak. 6 van die balle word gebruik. Hoeveel sokkerballe bly oor? There are 18 soccer balls in the bag. 6 of them are used. How many soccer balls are left? 	 18 – 6 = 12
Daar is 15 rooi albasters en 4 groen albasters in 'n sakkie. Wat is die verskil tussen die aantal rooi en groen albasters? There are 15 red marbles and 4 green marbles in a bag. What is the difference between the number of red and green marbles? 	 15 – 4 = 11
Daar is 19 potlode en 6 penne in 'n houer. Wat is die verskil tussen die aantal potlode en penne? There are 19 pencils and 6 pens in the jar. What is the difference between the number of pencils and pens? 	 19 – 6 = 13

25

Aftrekkingswoordprobleme

2



Hoeveel van elkeen word op die grafiek gewys?
How many of each are shown on the graph?

13	6	15	2	3

3

Hoeveel meer as is daar? How many more than ?	6 − 2 = 4
Hoeveel meer as is daar? How many more than ?	13 − 3 = 10
Hoeveel meer as is daar? How many more than ?	15 − 6 = 9

Addition and subtraction of 3 numbers

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Daar staan 6 motors op die parkeerterrein. Nog 4 motors parkeer op die parkeerterrein. Toe kom daar 3 motors meer aan. Hoeveel motors staan daar altesaam op die parkeerterrein?

There are 6 cars in the parking lot. Another 4 cars park in the parking lot. Then 3 more cars arrive. How many cars in the parking lot in total?





Kom ons gebruik die getallebaan om die probleem op te los.

Let's use the number track to solve the problem.

Julle kan vorentoe op die getallebaan spring om die antwoord te kry wanneer julle optel.

You can jump forwards on the number track to find the answer when you add.

6 + 4 + 3 = 13



Daar is 17 lekkers in die bottel. Ek gee 7 lekkers vir my broer. Ek gee toe 5 lekkers vir my suster. Hoeveel lekkers bly in die bottel oor?

There are 17 sweets in the jar. I give 7 sweets to my brother. I then give 5 sweets to my sister. How many sweets are left in the jar?



Julle kan agteruit op die getallebaan spring om die antwoord te kry wanneer julle aftrek.

You can jump backwards on the number track to find the answer when you subtract.

17 – 7 – 5 = 5



Vra die leerders om stories uit te dink wat lei tot ander woordprobleme wat optelling en aftrekking met 3 getalle behels. Help die leerders met die stories, indien nodig. Laat hulle toe om genoegsaam te oefen sodat hulle die klaswerk-aktiwiteite met behulp van die getallebane kan doen.

Ask learners to make stories that lead to other word problems which involve addition and subtraction using 3 numbers. Help the learners with their stories when necessary. Allow enough practice so that learners will be able to do the classwork activities using the number tracks.

Die optelling en aftrekking van 3 getalle

WEEK • WEEK 3

DAG 3 • DAY 3

Die optelling en aftrekking van 3 getalle
Addition and subtraction of 3 numbers

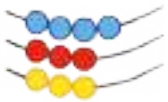
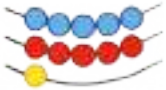
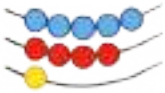
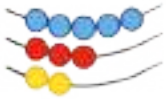
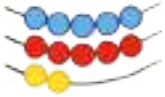
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING



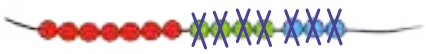
Gebruik jou getallebaan.
Use your number track.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

1 Hoeveel krale is daar altesaam?
How many beads altogether?

 4 + 4 + 2 = 10	 4 + 3 + 3 = 10
 5 + 5 + 1 = 11	 5 + 4 + 1 = 10
 5 + 3 + 2 = 10	 5 + 5 + 2 = 12

2 Trek af. Hoeveel krale bly oor?
Subtract. How many beads are left?

 13 – 3 – 3 = 7	 14 – 4 – 3 = 7
 15 – 5 – 4 = 6	 16 – 6 – 2 = 8
 17 – 7 – 3 = 7	 18 – 8 – 4 = 6

Addition and subtraction of 3 numbers

3

					
10	1	12	4	3	4

Hoeveel is daar? Encourage counting on

How many?

 10 + 1 + 4 = 15	 12 + 4 + 3 = 19

Wat is die **verskil**?

What is the **difference**?

 4 − 3 = 1	 12 − 10 = 2

4 Los die probleem op en kleur dan die antwoord heel onder in.

Solve and then colour the answer below. Remind learners to work left to right

8 + 2 + 2 = 12		10 + 5 + 5 = 20	
20 − 2 − 3 = 15		20 − 4 − 5 = 11	
12 − 2 − 1 = 9		8 + 2 + 6 = 16	
6 + 4 + 8 = 18		20 − 5 − 5 = 10	
7 + 3 + 4 = 14		5 + 5 + 3 = 13	
7 + 3 + 7 = 17		5 + 5 + 9 = 19	

9 10 11 12 13 14 15 16 17 18 19 20

Gemengde bewerkings

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons bereken 16 + 2 – 5.
Let's calculate 16 + 2 – 5.



1

Julle kan vorentoe en agteruit op die getallebaan spring om die antwoord te kry.
You can jump forwards and backwards on the number track to find the answer.

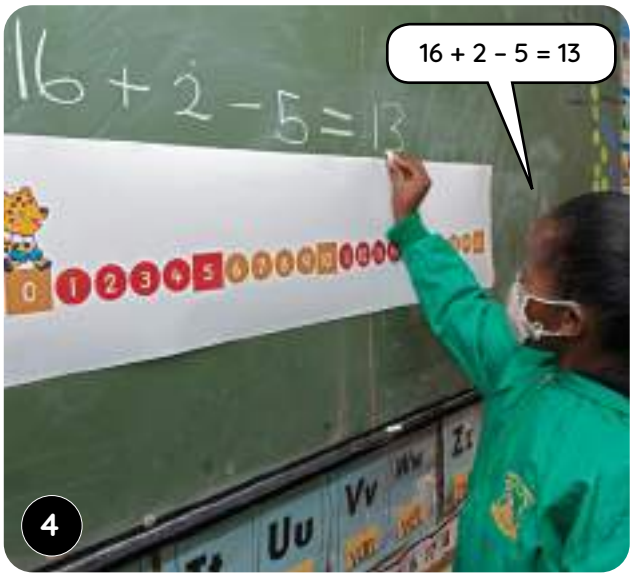


2

Ek spring op die trapklippe. Ek spring vorentoe tot by 16, dan maak ek nog 2 sprongе vorentoe om 2 by te tel en dan maak ek 5 sprongе agteruit om 5 af te trek.
I jump along the stepping stones. I jump forwards to 16, then forwards another 2 to add 2, then backwards 5 to subtract 5.



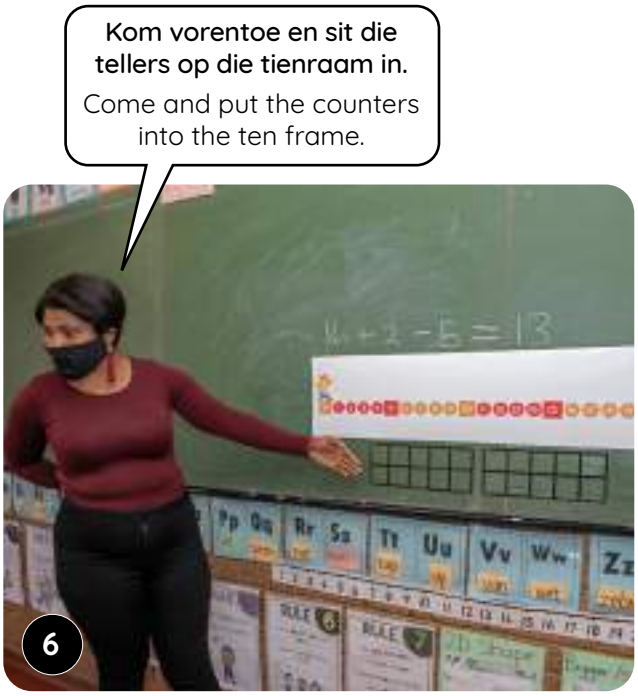
3



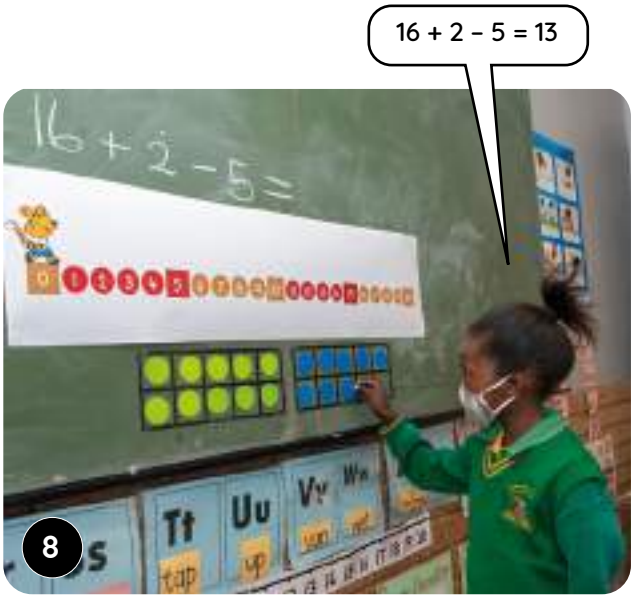
4

Mixed operations









Herhaal hierdie stappe met verskillende probleme wat optelling en aftrekking behels, byvoorbeeld:

7 + 3 – 6 = ____;
5 + 5 – 4 = ____;
16 + 4 – 9 = ____;
12 + 5 – 6 = ____

Doen die bewerkings saam met die klas op die getallebaan en met behulp van die tienrame.

Repeat these steps with different problems that involve addition and subtraction, for example:

7 + 3 – 6 = ____;
5 + 5 – 4 = ____;
16 + 4 – 9 = ____;
12 + 5 – 6 = ____.

Do the working together with the class on the number track and using the ten frames.

WEEK • WEEK 3

DAG 4 • DAY 4

Gemengde bewerkings
Mixed operations

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING



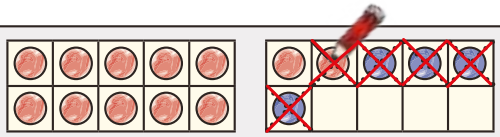
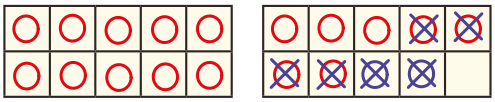
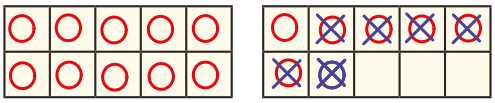
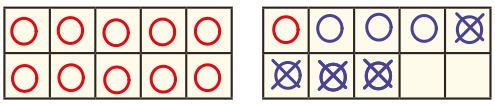
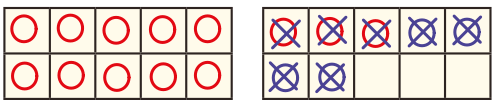
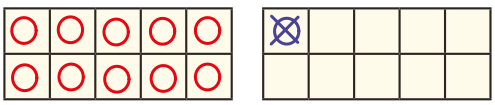
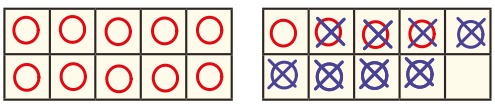
1 Los die probleme op.
Solve the problems.

Remind learners to work from left to right

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

9 + 4 – 2 = 11	7 + 7 – 3 = 11	12 – 2 – 2 = 8
8 + 6 – 3 = 11	8 + 8 – 2 = 14	11 – 3 – 3 = 5
9 + 5 – 4 = 10	9 + 9 – 5 = 13	12 – 4 – 4 = 4
8 + 9 – 5 = 12	6 + 6 – 2 = 10	11 – 5 – 5 = 1

2 Tel op en trek af met behulp van die tienrame.
Use the ten frames to add and subtract.

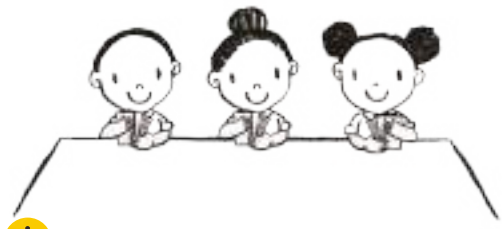
12 + 4 – 5 = 11	
17 + 2 – 6 = 13	
16 + 1 – 6 = 11	
11 + 7 – 4 = 14	
13 + 4 – 7 = 10	
10 + 1 – 1 = 10	
14 + 5 – 8 = 11	

Mixed operations

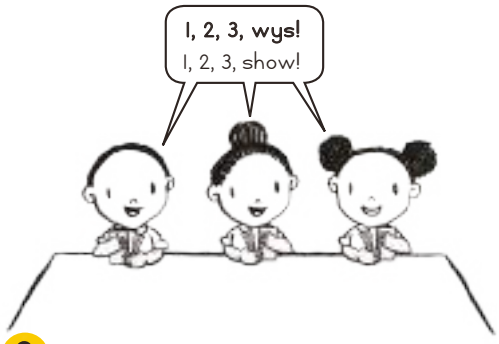
Speletjie: 1, 2, 3, wys! – optelling
Game: 1, 2, 3, show! – addition

Speel met die getalkaarte 0 tot 5. Skommel julle kaarte en sit dit met die gesig na onder op die skoolbank neer.

Play with the cards 0–5. Shuffle your number cards and put them face down on the desk.



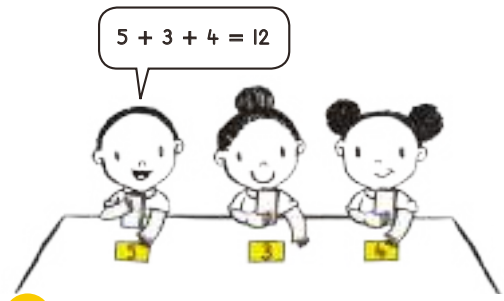
1



2

Die eerste leerder wat die getalle bymekaartel en die antwoord uitroep, hou die kaarte.

The first person to add the numbers and call out the answer keeps the cards.



3



4



5

Die leerder met die meeste kaarte aan die einde is die wenner van die speletjie.

The learner with the most cards at the end wins the game.

WEEK • WEEK 3

DAG 5 • DAY 5

Vaslegging
Consolidation

HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

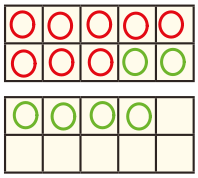
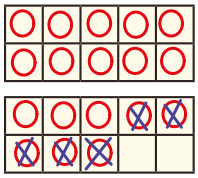
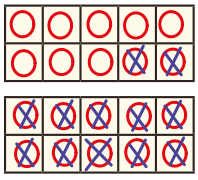


1 Los hierdie probleme op.
Solve these problems.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

6 + 4 + 5 = 15	13 – 3 – 4 = 6	7 + 3 + 8 = 18
16 – 6 – 5 = 5	5 + 5 + 7 = 17	19 – 9 – 2 = 8
8 + 2 + 9 = 19	17 – 7 – 6 = 4	9 + 1 + 6 = 16
15 – 5 – 3 = 7	4 + 2 + 6 = 12	18 – 8 – 7 = 3

2 Los hierdie woordprobleme met behulp van die tienrame op.
Solve these word problems using the ten frames.

Mamma sit 8 rooi appels en 6 groen appels in 'n bak. Hoeveel appels sit sy altesaam in die bak? Mother puts 8 red apples and 6 green apples in a bowl. How many apples does she put in the bowl altogether? 	 8 + 6 = 14
Daar is 18 koeie op die plaas. 5 van hierdie koeie verdwaal. Hoeveel koeie bly daar oor? There are 18 cows on the farm. 5 of these cows get lost. How many cows are left? 	 18 – 5 = 13
Juffrou het 20 nuwe potlode in haar laai. 12 potlode word gebruik. Hoeveel potlode is steeds nuut? Teacher has 20 new pencils in her drawer. 12 pencils are used. How many pencils are still new? 	 20 – 12 = 8

Assessment and consolidation

3 Bereken.
Calculate.

= 13	= 14	= 5	= 6	= 7

+ + 6 + 5 + 7 = 18	+ + 7 + 7 + 6 = 20
− − 13 − 5 − 7 = 1	− − 13 − 7 − 6 = 0
− − 14 − 6 − 7 = 1	− − 14 − 7 − 5 = 2

4 Los die probleme op.
Solve the problems.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

11 + 3 − 2 = 12	14 + 2 − 5 = 11	12 − 5 + 2 = 9
13 + 6 − 5 = 14	16 + 2 − 6 = 12	11 − 7 + 4 = 8
16 − 4 + 2 = 14	19 − 7 + 2 = 14	14 − 8 + 3 = 9
15 − 3 + 4 = 16	18 − 6 + 7 = 19	13 − 6 + 2 = 9
4 + 5 + 1 = 10	7 + 3 − 5 = 5	20 − 7 − 3 = 10
5 + 5 + 2 = 12	6 + 4 − 6 = 4	20 − 4 − 5 = 11

Volume en kapasiteit

	Hulpbronne
Hoofrekene: Getalkombinasies van tien met behulp van kolkaarte	onderwyser se kolkaarte
Speletjie: Watter houer hou meer?	verskeie houers (deur onderwyser versamel)










Dag	Lesaktiwiteit	Leshulpbronne
1	Vergelyk volume en kapasiteit	LB, verskeidenheid 1 liter-houers
2	Meet volume en kapasiteit	LB, 2 van elk: 500 ml-bottels, 1 liter-bottels, 2 liter-bottels, water
3	Meet volume en kapasiteit	LB, joghurthouer, margarienhouer, roomyshouer, klein koppie, water, bak
4	Meet volume en kapasiteit	LB, vier 2 liter-bottels, koppies, lepel, klein koppie, groot koppie, klein beker, groot beker, bak
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Die hoeveelheid vloeistof, wat twee houers kan hou as dit volgemaak word, te vergelyk en te rangskik	
Die kapasiteit van houers met behulp van nie-standaard mates, soos lepels en koppies, **te meet**, **te vergelyk**, **te rangskik** en **aan te teken**	

Formele assessering (verwys na die Assesseringsboek)

Skriftelike assessering: Meting: Volume en kapasiteit – Vergelyk en meet volume en kapasiteit met behulp van nie-standaard eenhede.

Mondelinge en praktiese assessering: Meting: Volume en kapasiteit – Assesseer die leerders se vermoë om woordeskat (vol en leeg) te gebruik, hoeveelhede in houers volgens kapasiteit te orden en te vergelyk, en kapasiteit met behulp van nie-standaard mates te skat en te meet.

Volume and capacity

	Resources
Mental Maths: Bonds of ten using dot cards	teacher dot cards
Game: Which container holds more?	assorted containers (collected by teacher)










Day	Lesson activity	Lesson resources
1	Comparing volume and capacity	LB, variety of 1-litre containers
2	Measuring volume and capacity	LB, 2 of each: 500-ml bottles, 1-litre bottles, 2-litre bottles, water
3	Measuring volume and capacity	LB, yoghurt tub, margarine tub, ice-cream tub, small cup, water, bowl
4	Measuring volume and capacity	LB, four 2-litre bottles, cups, spoon, small cup, large cup, small jug, large jug, bowl
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Compare and order the amount of liquid that two containers can hold if filled	
Measure, **compare**, **order** and **record** the capacity of containers by using non-standard measures, for example, spoons and cups	

Formal assessment (see the Assessment Booklet)

Written assessment: Measurement: Volume and capacity – Comparing and measuring volume and capacity using non-standard units.

Oral and practical assessment: Measurement: Volume and capacity – Assess the learners' ability to use vocabulary (full and empty), order and compare amounts in containers according to capacity, and estimate and measure capacity using non-standard measures.

Volume en kapasiteit

Hoofrekene

Ons lê hierdie week kennis van die getalkombinasies van 10 met behulp van kolkaarte vas. Ons herhaal die aktiwiteit van week 4 waarin die leerders 10 moes visualiseer deur die tienrame, wat met behulp van die gedrukte kolkaarte geskep is, 'vol te maak'. Hierdie aktiwiteit versterk die leerders se begrip van getalkombinasies tot 10.



Speletjie

Watter houer hou meer?



Konsepontwikkeling

Ons konsentreer hierdie week op die begrippe volume en kapasiteit. Die leerders moet prakties by hierdie lesse betrek word om 'n deeglike begrip hiervan te ontwikkel. Terwyl ons met volume en kapasiteit werk, val ons fokus daarop om:



- die hoeveelheid vloeistof wat twee houers kan hou, te vergelyk en te rangskik.
- die toepaslike woordeskat te gebruik om die volume/kapasiteit van houers te beskryf.
- **volume/kapasiteit** met behulp van 'n verskeidenheid nie-standaard mates **te meet**, **te orden** en **aan te teken**.

Waarna jy hierdie week moet oplet

- Die woordeskat wat met die begrippe volume en kapasiteit gepaard gaan, kan vir die leerders moeilik wees. Hulle moet aangemoedig word om die taal (**vol**, **leeg**, **meer as**, **minder as**, **dieselfde as**, **vergelyk**, **hoeveelheid**, **meet**, **kapasiteit**, **volume**, **die meeste**, **die minste**, **rangskik**, **teken aan**, **houer**, **koppie**, **lepel**) soveel moontlik te gebruik.
- Die doel daarvan om nie-standaard metingseenhede te gebruik, is om die leerders te lei tot die besef dat 'n standaardmetingseenheid noodsaaklik is. Die verskillende antwoorde wat verkry word wanneer daar in nie-standaard eenhede gemeet word, help die leerders om te verstaan dat ons dieselfde eenheid moet gebruik sodat ons antwoorde vergelykbaar is.
- Is die leerders aktief by die aktiwiteite betrokke om hul konseptuele begrip van volume en kapasiteit te ontwikkel?

Volume and capacity

Mental Maths

This week we consolidate knowledge of the bonds of 10 using dot cards. We repeat the activity from Week 4 in which learners have to visualise 10 by filling the ten frames created by the printed dot cards. This activity strengthens learners' understanding of their bonds to 10.



Game

Which container holds more?



Concept development

This week we focus on the concept of volume and capacity. Learners must become practically involved in these lessons in order to develop a sound understanding of these concepts. In our work on volume and capacity, we will focus on:



- comparing and ordering the amount of liquid that two containers can hold.
- using the appropriate vocabulary to describe the volume/capacity of containers.
- **measuring**, **ordering** and **recording volume/capacity** using a variety of non-standard measures.

What to look out for this week

- Learners may find the vocabulary associated with the concepts of volume and capacity difficult. They need to be encouraged to use the language (**full**, **empty**, **more than**, **less than**, **the same as**, **compare**, **amount**, **measure**, **capacity**, **volume**, **most**, **least**, **order**, **record**, **container**, **cup**, **spoon**) as much as possible.
- The purpose of using non-standard units of measurement is to lead learners to the realisation that a standard unit of measurement is necessary. The variations in answers when measuring in non-standard units help learners to understand that we need to use the same unit in order for our answers to be comparable.
- Are learners actively involved in the activities in order to develop their conceptual understanding of volume and capacity?

WEEK 4 • DAG 1

Vergelyk volume en kapasiteit

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Oefen getalkombinasies van 10 met die onderwyser se kolkaarte – sien bladsy 42.

Practise bonds of 10 using teacher dot cards – see page 42.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

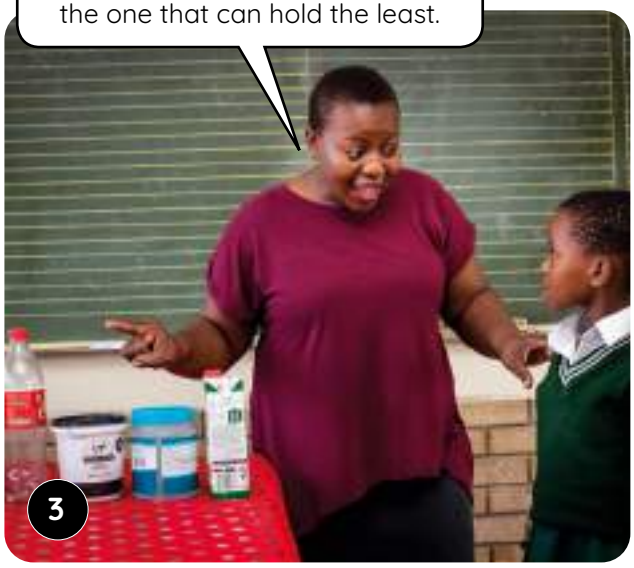




Gee die leerders tyd om dit te bespreek.

Give learners time to discuss.

Comparing volume and capacity







Gooi die water uit die eerste houer in elk van die ander houers in. Laat die leerders gesels oor die feit dat die houers dieselfde hoeveelheid water hou, selfs al lyk die vorm en grootte daarvan anders.

Pour the water from the first container into each of the other containers. Get learners to talk about the fact that the containers hold the same amount of water even though they look different in shape and size.

Alhoewel houers verskillend kan lyk, kan dit dieselfde hoeveelheid water hou as dit dieselfde kapasiteit het. Die bottels in hierdie aktiwiteit kan almal 1 liter hou. Deurdat die leerders die kapasiteit van 'n houer visualiseer, help dit hulle om hul opvatting oor kapasiteit (hoeveel 'n houer kan hou) te ontwikkel. Jy moet soveel moontlik leerders by die vergelykingsbespreking en -aktiwiteite betrek.

Although containers may look different, if they have the same capacity, they can hold the same amount of water. The bottles in this activity can all hold 1 litre. Visualising the capacity of a container helps learners to develop their concept of capacity (how much a container can hold). You should involve as many of the learners as possible in the comparison discussion and activities.

Vergelyk volume en kapasiteit

WEEK 4 • WEEK

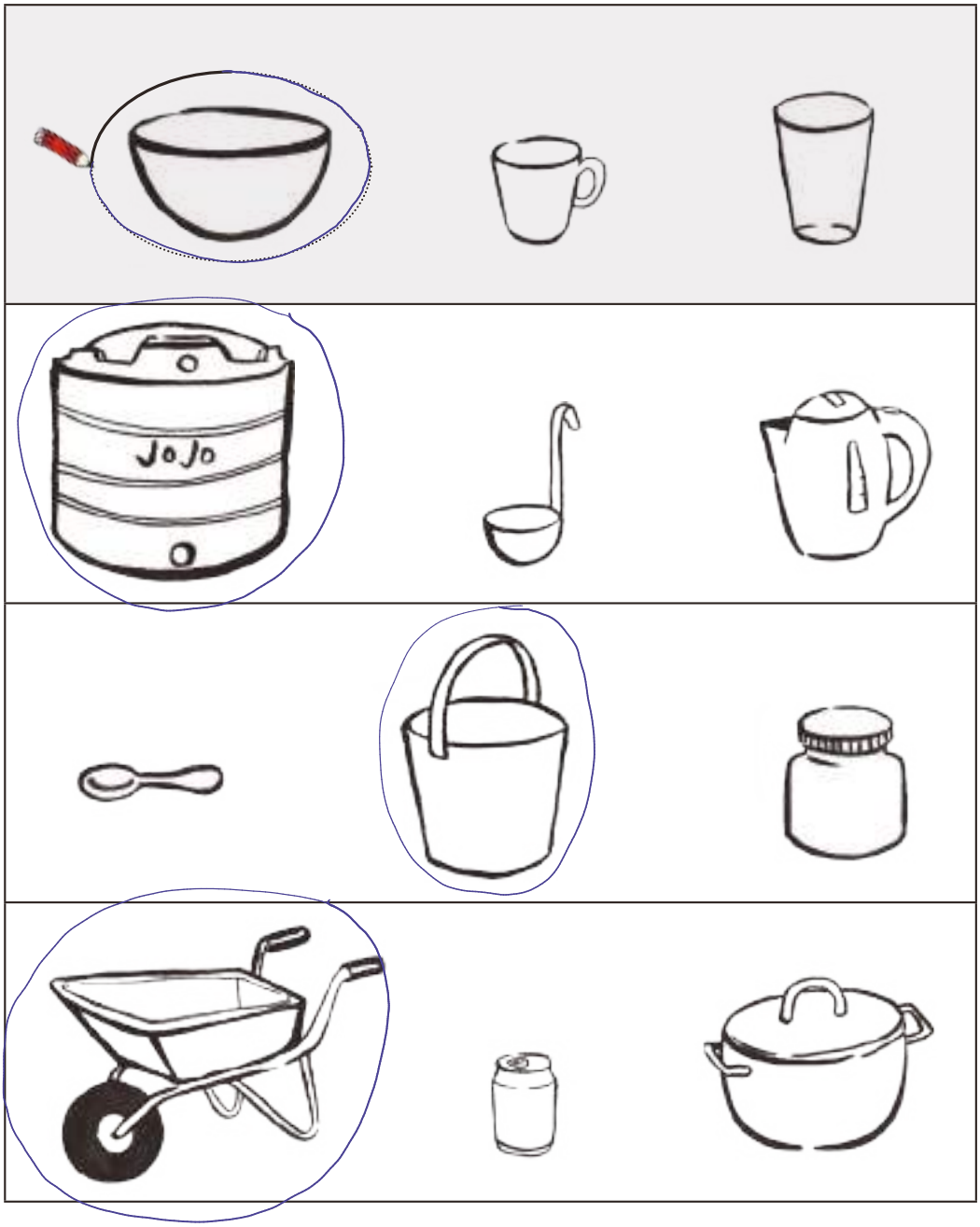
DAG 1 • DAY 1

Vergelyk volume en kapasiteit
Comparing volume and capacity

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Omkring die houer wat die **meeste** kan hou.

Circle the container that can hold the **most**.



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Comparing volume and capacity

2 Omkring **meer as** of **minder as**.

Circle **more than** or **less than**.

Die lepel hou The spoon holds 	meer as more than minder as less than	die koppie. the cup. 
Die beker hou The jug holds 	meer as more than minder as less than	die glas. the glass. 
Die glas hou The glass holds 	meer as more than minder as less than	die teekoppie. the teacup. 
Die beker hou The jug holds 	meer as more than minder as less than	die blou emmer. the blue bucket. 
Die bottel hou The bottle holds 	meer as more than minder as less than	die lepel. the spoon. 
Die rooi emmer hou The red bucket holds 	meer as more than minder as less than	die koppie. the cup. 

Meet volume en kapasiteit

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





Die kapasiteit van 'n houer vertel ons hoeveel dit kan hou. As die houer vol is, is dit tot die volle kapasiteit daarvan volgemaak. As dit leeg is, is dit glad nie volgemaak nie. Hoeveel water is daar in elkeen van die bottels?

The capacity of a container tells us how much it can hold. If the container is full, it is filled to its capacity. If it is empty, it has not been filled at all. How much water is in each of the bottles?

Measuring volume and capacity





Gooi water met die koppie in die verskillende houers in. Tel die aantal koppies wat in elke houer kan ingaan. Bespreek die verskil in kapasiteit van die houers.

- **Hoe groter 'n houer is, hoe meer kan dit hou.**
- **Die vorm van 'n houer kan dit laat lyk of dit meer/minder kan hou in vergelyking met 'n ander houer.**
- **Wanneer die vlak van die water in twee houers dieselfde is, beteken dit nie noodwendig dat daar dieselfde hoeveelheid water in die houers is nie.**

Use the cup to pour water into the different containers. Count the number of cups that can go into each container. Discuss the differences in **capacity** of the containers.

- The bigger a container is, the more it can hold.
- The shape of a container can make it look as if it can hold more/less compared to another container.
- When the **level** of the water in two containers is the same, it does not necessarily mean there is the same **amount** of water in the containers.

Moedig die leerders aan om self die terminologie te gebruik sodat hulle aan die nuwe woorde gewoond raak. Gee hulle geleenthede om die kapasiteit van bottels van verskillende vorms te vergelyk deur koppies water in die verskillende houers in te gooi.

Encourage learners to use the terminology themselves so that they become accustomed to the new words. Give the learners opportunities to compare the capacity of differently shaped bottles by pouring cups of water into the different containers.

WEEK • WEEK 4

DAG 2 • DAY 2

Meet volume en kapasiteit
Measuring volume and capacity

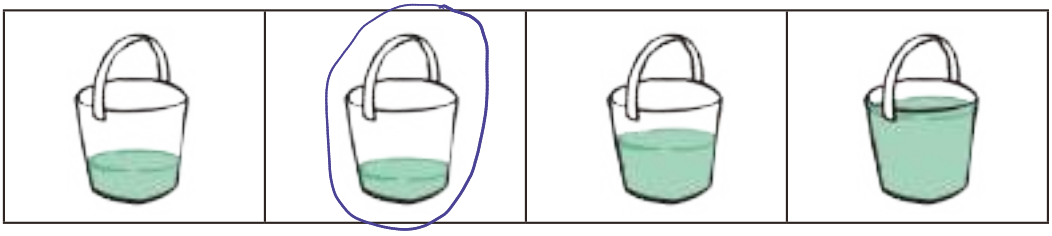
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

vol full	leeg empty	dieselfde hoeveelheid the same amount
		

1 Omkring die emmer met die **meeste** water.
Circle the bucket with the **most** water.

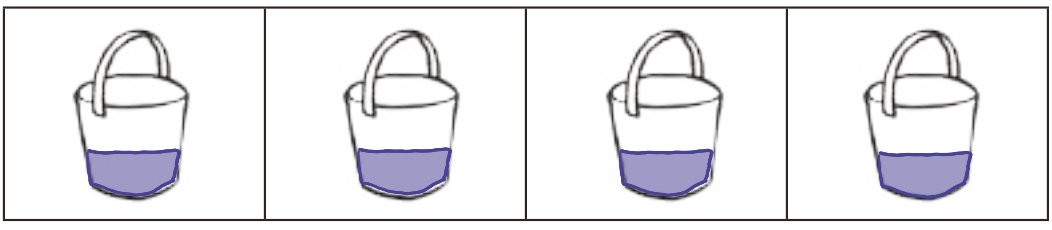


2 Omkring die emmer met die **minste** water.
Circle the bucket with the **least** water.



3 Teken **dieselfde** hoeveelheid water in elke emmer.
Draw the **same** amount of water in each bucket.

Solutions might vary here but check that the level in all four buckets is the same



35

Measuring volume and capacity

Learners may shade or circle the correct answers

4 Kleur die korrekte woord in wat by die prent pas.

Colour the correct word to match the picture.

	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty

Meet volume en kapasiteit

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





Roep 'n leerder na vore en laat hulle elke houer met 'n klein koppie volmaak. Die klas moet tel hoeveel koppies water gebruik word om elke houer vol te maak. As die hoeveelhede nie presies is nie, besluit hoe jy die meting gaan aandui, byvoorbeeld 3 en 'n halwe koppie.

Call a learner to the front and let them fill each container using a small cup. The class must count how many cups of water it takes to fill each container. If the amounts are not exact, decide how to state the measuremen, for example, 3 and a half cups.

Measuring volume and capacity





Bespreek die bevindinge saam as klas. Maak die houers leeg en laat ander leerders 'n kans kry om dit vol te maak en die koppies te tel terwyl hulle die water ingooi.

Discuss the findings as a class. Empty the containers and let other learners have a chance to pour and fill them, counting the cups as they do.

Maak seker dat die leerders heelwat geleenthede kry om kapasiteit te oefen deur prakties by meting met koppies (of ander nie-standaard eenhede) betrokke te wees.

Make sure that the learners have plenty of opportunities to practise comparing capacity by being practically involved in measuring using cups (or other non-standard units).

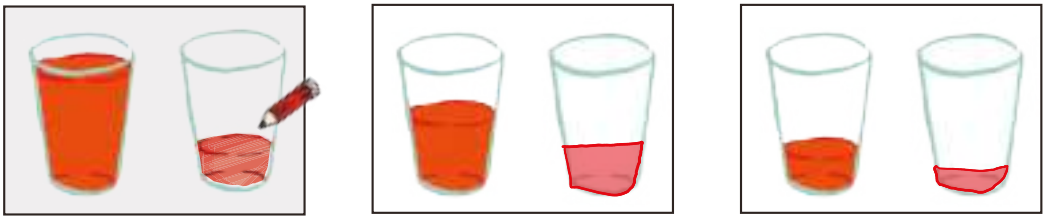
WEEK • WEEK 4

DAG 3 • DAY 3

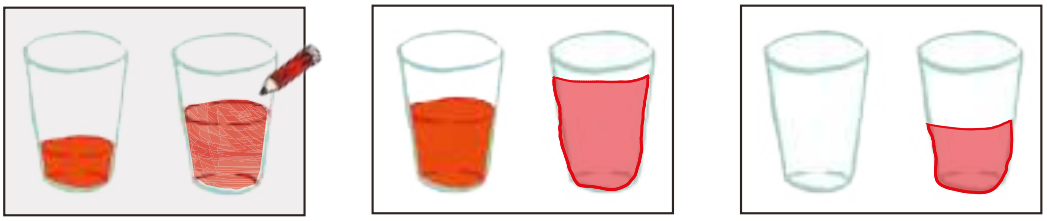
Meet volume en kapasiteit
Measuring volume and capacity

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

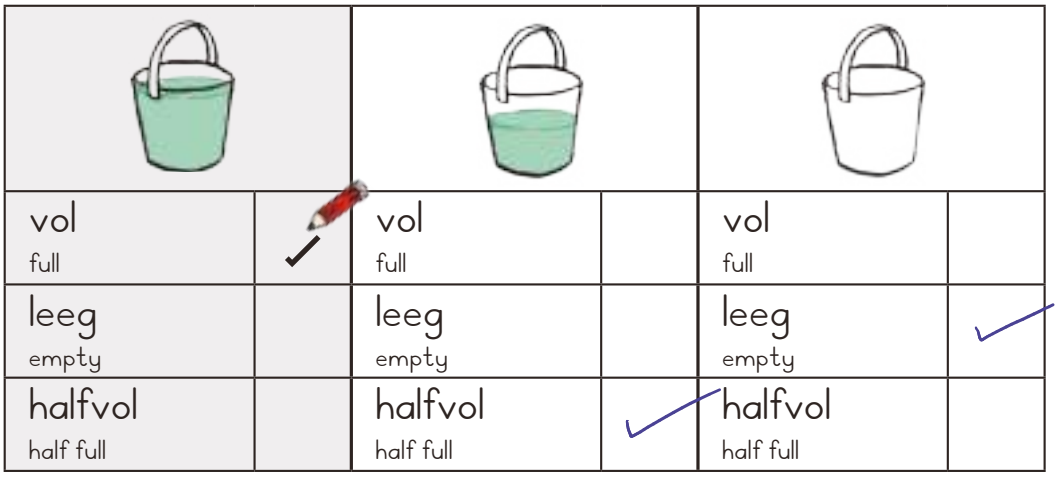
1 Kleur die tweede glas in sodat dit **minder as** die eerste glas bevat.
Colour in the second glass so that it has **less than** the first glass.



2 Kleur die tweede glas in sodat dit **meer as** die eerste glas bevat.
Colour in the second glass so that it has **more than** the first glass.



3 Merk die korrekte woord wat die prente beskryf.
Tick the correct word to describe the pictures.



vol full	✓	vol full		vol full	
leeg empty		leeg empty		leeg empty	✓
halfvol half full		halfvol half full	✓	halfvol half full	

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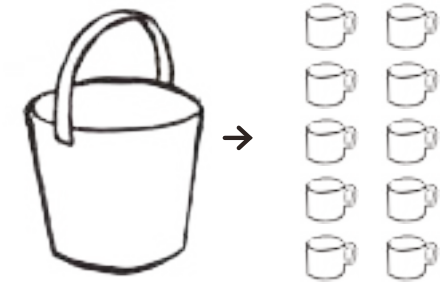
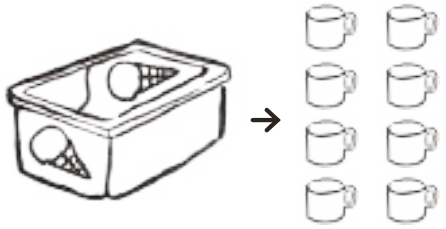
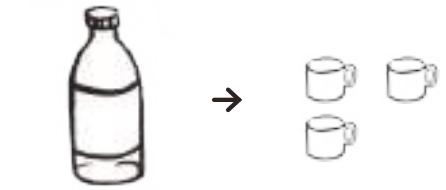
Measuring volume and capacity

Ask learners to compare the capacity of the different containers

4 Kyk na die prente en voltooi die sinne.

Look at the pictures and complete the sentences.

	Die emmer hou ___ klein koppies. The bucket holds 10 small cups.
	Die roomyshouer hou ___ klein koppies. The ice-cream tub holds 8 small cups.
	Die fles hou ___ klein koppies. The jar holds 4 small cups.
	Die groot glas hou ___ klein koppies. The large glass holds 2 small cups.
	Die bottel hou ___ klein koppies. The bottle holds 3 small cups.

Meet volume en kapasiteit

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





Werk saam met die klas om te skat en dan te meet hoeveel botteltjies water daar in elk van die bottels is. Skat eers en meet dan.

- **Bespreek die metings van elke bottel terwyl julle die aktiwiteit doen.**
- **Gebruik dit wat julle omtrent die hoeveelheid water in die eerste en tweede bottel weet om die hoeveelheid water in die volgende bottel te skat, en gaan so voort.**

Work with the class to **estimate** and then **measure** how many small jars of water are in each of the bottles. First estimate, then measure.

- Discuss the measurements for each bottle as you do the activity.
- Use what you know about the amount of water in the first and second bottles to estimate the amount of water in the next bottle and so on.

Measuring volume and capacity





Werk saam met die klas om te skat en dan te meet hoeveel botteltjies water daar in elkeen van die bottels is. Skat eers en meet dan.

- **Bespreek die skattings en metings vir elke bottel terwyl julle met die aktiwiteit besig is.**
- **Het ons dieselfde meting met die botteltjie en die houer gekry? Waarom?**

Work with the class to estimate and then measure how many jars of water are in each of the bottles. First estimate, then measure.

- Discuss the estimates and measurements for each bottle as you do the activity.
- Did we get the same measurement using the different jars? Why?

Sit tyd opsy sodat die leerders die hoeveelheid water in verskillende houers kan skat en meet om die metings daarvan te vergelyk. Om dieselfde meting te kry, moet ons almal met dieselfde grootte houer meet.

Give learners time to estimate and measure the amount of water in different containers and to compare their measurements. To get the same measurement, we would all need to measure with the same container.

Meet volume en kapasiteit

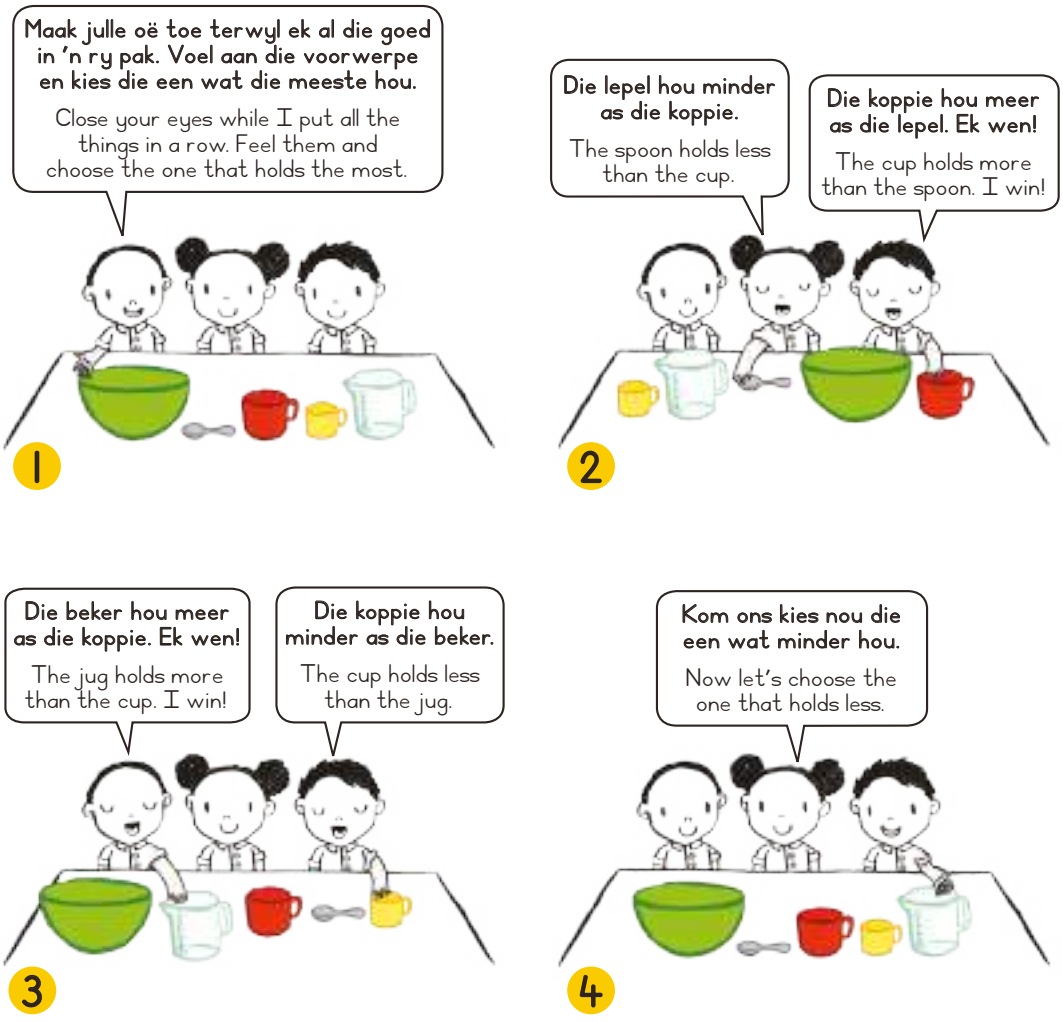
WEEK 4 • WEEK

DAG 4 • DAY 4

Meet volume en kapasiteit
Measuring volume and capacity

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

Speletjie: Watter houer hou meer?
Game: Which container holds more?



Die leerders maak beurte om items te kies. Hulle kan aantekeninge maak van hoeveel keer hulle 'n punt wen.

Learners take turns to choose items. They can keep a record of how many times they win a point.

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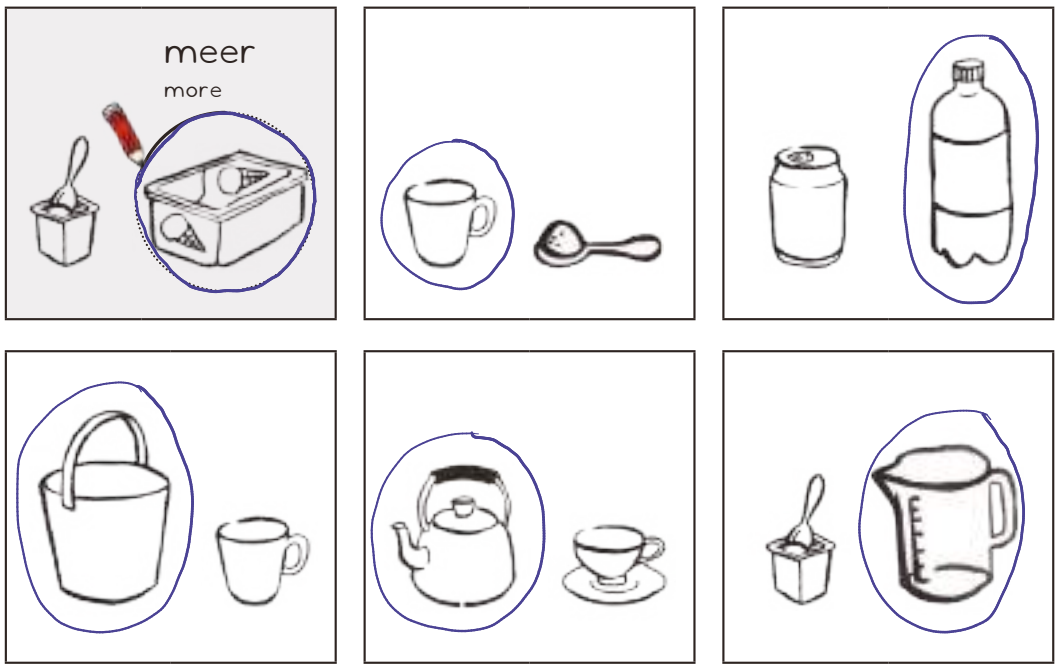
Measuring volume and capacity

1 Omkring die houer wat **meer** hou.

Circle the container that holds **more**.



2 Omkring die houer wat **minder** hou.

Circle the container that holds **less**.



WEEK 4 • WEEK

DAG 5 • DAY 5

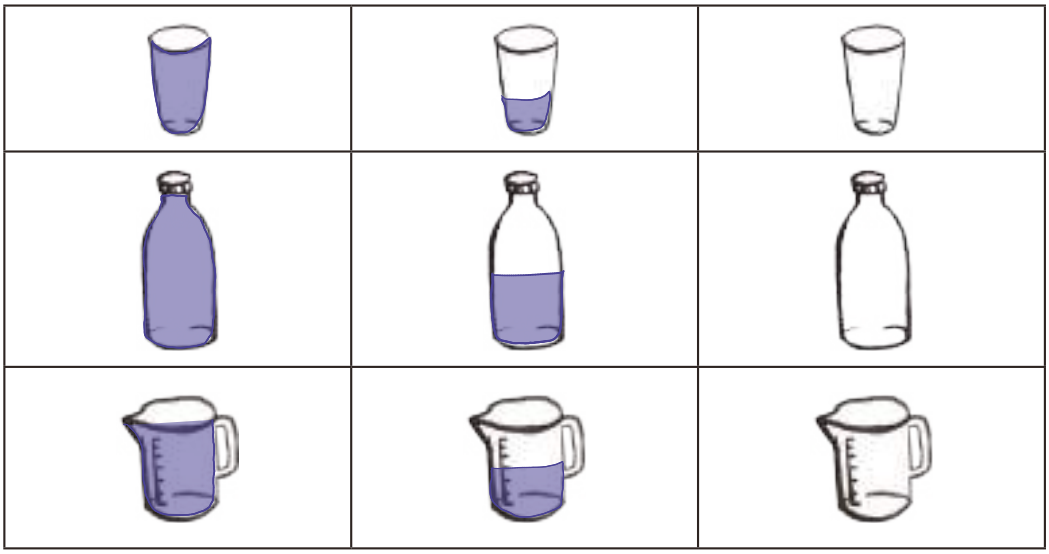
Vaslegging
Consolidation

HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Skryf **vol** of **leeg**.
Write **full** or **empty**.

	vol full		leeg empty
	 empty		 full
	 empty		 full
	 full		 empty

2 Kleur die houers in om dit **vol**, **halfvol** en **leeg** te wys.
Colour the containers to show them **full**, **half full** and **empty**.



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Assessment and consolidation

Learners may shade or circle the correct answers

3 Kleur die korrekte woord in wat by die prent pas.

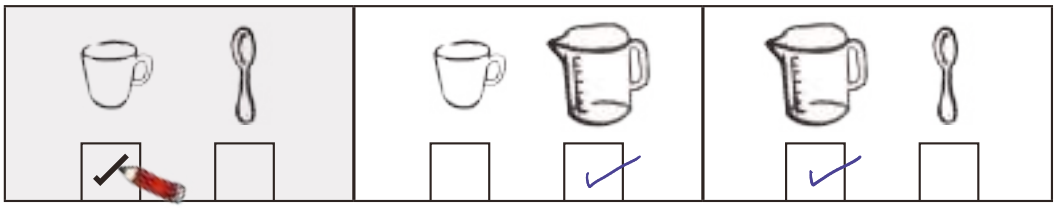
Colour the correct word to match the picture.

	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty

	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty
	vol full	leeg empty

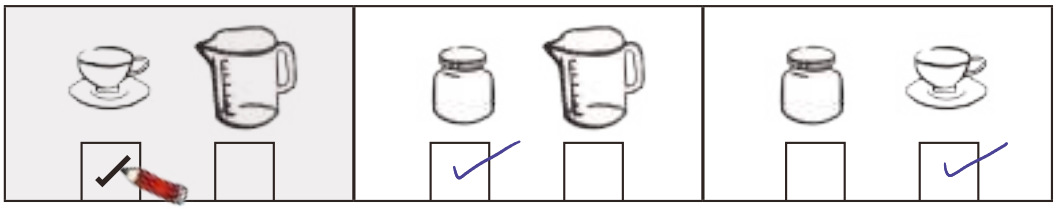
4 Merk die voorwerp wat **meer** hou.

Tick the item that holds **more**.



5 Merk die voorwerp wat **minder** hou.

Tick the item that holds **less**.



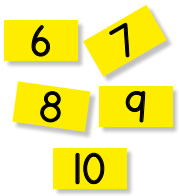
Optellingspatrone

	Hulpbronne
Hoofrekene: Getalkombinasies van 10 met getalkaarte	getalkombinasieflitskaarte, getalkaarte 0 tot 10 (leerders)
Speletjie: 1, 2, 3, wys! – optelling	getalkaarte 0 tot 10 (leerders)












Dag	Lesaktiwiteit	Leshulpbronne
1	Die getalle op 'n getallelyn	LB, getallelyn (onderwyser), getallebaan (onderwyser)
2	Tel by 9 by	LB, getallelyn (onderwyser), twee tienrame, 20 tellers
3	Tel by 8 en 7 by	LB, getallelyn (onderwyser), twee tienrame, 20 tellers
4	Optellingspatrone	LB, optellingskaarte (onderwyser), dobbelstene en tellers
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
'n Getallelyn te gebruik om getalle in volgorde te plaas en optellingsprobleme op te los	
Optellingsprobleme (met oorbrugging van 10) op te los deur 'n tien te maak	
Optellingspatrone met behulp van optellingskaarte te kry	

Formele assessering (verwys na die Assesseringsboek)

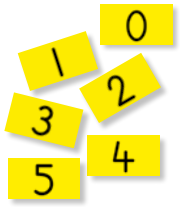
Skriftelike assessering: Getalle, Bewerkings en Verwantskappe – Optelling met oorbrugging van tien met behulp van tienrame, getallelyne en getalpatrone.

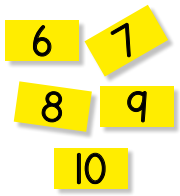
Addition patterns

	Resources
Mental Maths: Bonds of 10 using number cards	number bond flash cards, learner number cards 0–10
Game: 1, 2, 3, show! – addition	learner number cards 0–10












Day	Lesson activity	Lesson resources
1	Numbers on a number line	LB, number line (teacher), number track (teacher)
2	Adding on to 9	LB, number line (teacher), two ten frames, 20 counters
3	Adding on to 8 and 7	LB, number line (teacher), two ten frames, 20 counters
4	Addition patterns	LB, addition cards (teacher), dice and counters
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Use a number line to sequence numbers and to solve addition problems	
Solve addition (bridging 10) problems by making a ten	
Find patterns of addition using addition cards	

Formal assessment (see the Assessment Booklet)

Written assessment: Numbers, Operations and Relationships – Addition bridging ten using ten frames, number lines and number patterns.

Optellingspatrone

Hoofrekene

Ons konsentreer hierdie week op **getalkombinasies** van 10 en wys die samevoeging van getalkombinasies met ons optellingsgetalkaarte. Dis ’n goeie manier om die leerders aktief by die les te betrek. Dit bied ook ’n maklike manier aan jou om te sien of die kinders hul getalkombinasies ken. Deur vinnig in die klaskamer rond te kyk, sal jy kan sien watter leerders die korrekte kaart ophou en enige wanopvattings dadelik uit die wegruim.



Speletjie

1, 2, 3, wys! – optelling

Konsepontwikkeling

Ons konsentreer hierdie week op **optelling**.
Die leerders leer van die verwantskap tussen getallebane en getallelyne, en hulle los daarby **optellingsprobleme** op **wat 10 oorbrug**. Terwyl ons met optelling werk, konsentreer ons daarop om:



- getalle met behulp van getallebane en getallelyne in volgorde te plaas en getalle bymekaar te tel.
- probleme wat optelling met oorbrugging van 10 behels, op te los deur ’n tien te maak. Die leerders besef dat, as hulle ’n tien maak terwyl hulle 9, 8 of 7 bymekaartel, dit makliker en vinniger is om probleme op te los.
- probleme met behulp van tellers en tienrame op te los, wat by die leerders ’n begrip van plekwaarde laat ontwikkel.
- skakels te skep tussen die oplossing van probleme met tienrame en tellers en die oplossing van probleme met getallebane en getallelyne. Die leerders moet begin om vroeg reeds getallelyne te gebruik, aangesien getallelyne ’n belangrike wiskundige voorstelling is.

Waarna jy hierdie week moet oplet

- Daar word aanbeveel dat ’n tien gekry word om **optellingsprobleme** op te los as ’n manier waarop die leerders van die oplossing van probleme deur te tel, kan wegbeweeg na die vermoë om probleme met behulp van hoofrekene op te los.
- Dit is belangrik dat die leerders moet verstaan hoe getalle met behulp van tienrame en tellers afgebreek en opgebou word. Dit sal voortbou op hul begrip van **plekwaarde**.
- Moedig gesprekke tussen die leerders aan sodat hulle sodoende hul oplossingsmetodes onder mekaar uitruil. Maak seker dat die leerders die korrekte woordeskat (**’n tien**, **ene**, **tel by/ bymekaar**, **en**, **meer**, **verminder**, **vermeerder**) gebruik.

Addition patterns

Mental Maths

We focus on **bonds of 10** this week and use our addition number cards to show the number bond combinations. This is a good way to keep learners actively involved in the lesson. It also provides an easy way for you to see if the children know their bonds. A quick glance around the classroom will allow you to see which learners are holding up the correct card and immediately address any misconceptions.



Game

1, 2, 3, show! – addition

Concept development

This week we focus on **addition**. Learners will learn about the relationship between number tracks and number lines, and they will also solve **addition problems that bridge 10**. In our work on addition, we will focus on:



- using number tracks and number lines to sequence numbers and to add numbers.
- solving addition bridging 10 problems by making a ten. Learners will realise that making a ten when adding with 9, 8 or 7 makes it easier and quicker to solve problems.
- solving problems by using counters and ten frames, which begins to develop an understanding of place value.
- creating links between solving problems with ten frames and counters and solving problems with number tracks and number lines. Learners need to start using number lines early on as they are an important mathematical representation.

What to look out for this week

- Making a ten to solve **addition problems** is recommended as a way to move learners from solving problems by counting to being able to solve problems by using mental calculations.
- It is important for learners to understand how to break down and build up numbers by working with ten frames and counters. This will build their understanding of **place value**.
- Encourage conversation between learners so that they can share their solution methods. Ensure that learners are using the correct vocabulary (**a ten**, **ones**, **add**, **and**, **more**, **increase**, **decrease**).

Die getalle op ’n getallelyn

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Oefen getalkombinasies van 10 met julle getalkombinasieflitskaarte. Sien bladsy 42.

Practise bonds of 10 using your number bond flash cards. See page 42.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT







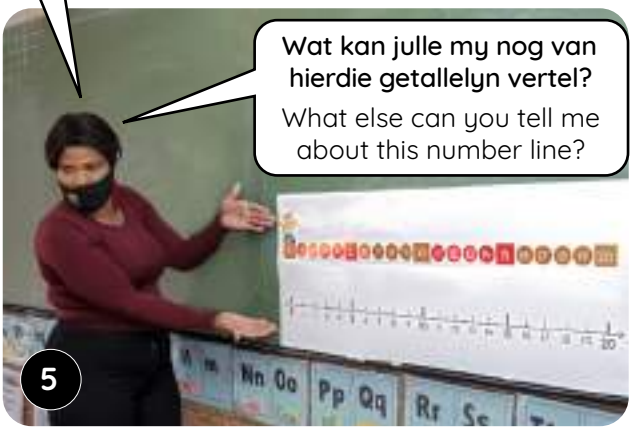


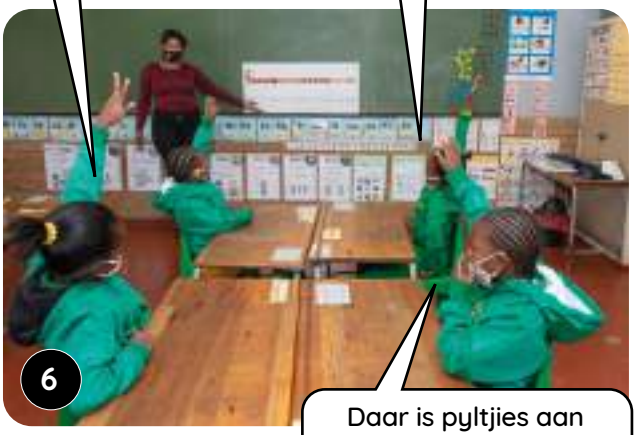
Numbers on a number line

Ons gebruik 'n getallelyn in wiskunde in plaas van 'n getallebaan. Dis veel makliker om dit te trek.
In maths, we use a number line instead of a number track. It is much easier to draw.

Daar is klein lyntjies wat na elke getal wys.
There are little lines pointing to each number.

Die gapings tussen die getalle is almal ewe groot.
The gaps between the numbers are all the same size.





Daar is pyltjies aan albei kante van die lyn.
There are arrows at the ends of the line.

Ja, die pyltjies wys ons dat die lyn in albei rigtings aanhou.
Yes, the arrows show us that the line keeps going in both directions.



Maak seker dat die leerders aan hierdie bespreking deelneem en die skakels tussen die getallebaan en die getallelyn kan raaksien. Verduidelik aan hulle dat ons voortaan die getallelyne dikwels gaan gebruik; hulle moet dus weet hoe om dit te gebruik.

Make sure that learners participate in this discussion and can see the links between the number track and the number line. Explain to them that from now on we will use number lines often, so they need to know how to use them.

Wys my hoe om 7 + 3 op die getallebaan en op die getallelyn uit te werk.
Show me how to work out 7 + 3 on the number track and number line.



Ek sal by 7 begin en dan 3 spronge vorentoe beweeg.
I would start at 7, and then take 3 steps forwards.



Gee die leerders baie geleenthede om die skakels tussen getallebane en getallelyne te bespreek. Doen dit deur hulle na vore te roep om optellingsprobleme met behulp van die getallebaan en die getallelyn op te los. Hou die getalgebied in hierdie les tot 10.

Give learners lots of opportunities to discuss the links between number tracks and number lines. Do this by calling them to the front to solve addition problems by using the number track and number line. In this lesson, keep the number range up to 10.

Die getalle op 'n getallelyn

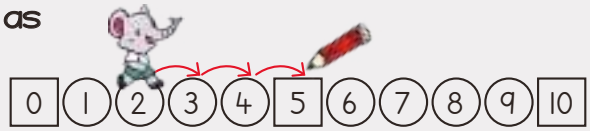
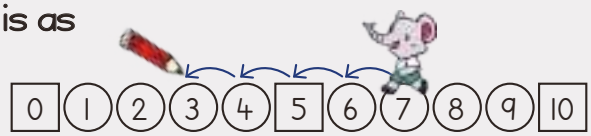
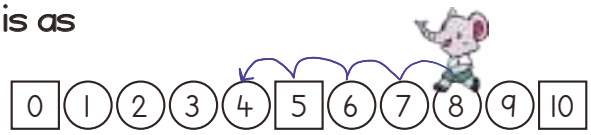
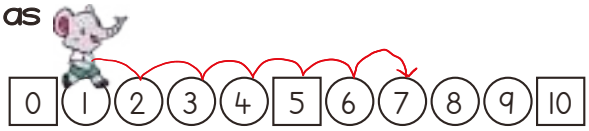
WEEK 5 • WEEK

DAG 1 • DAY 1

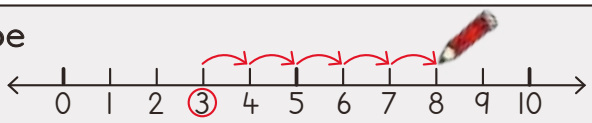
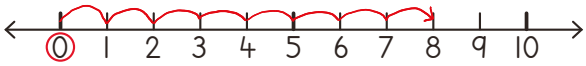
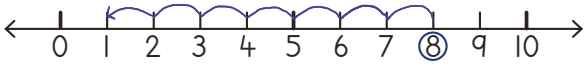
Die getalle op 'n getallelyn
Numbers on a number line

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1

Spring na die getal wat: Jump to the number that is:	Waar is jy nou? Where are you now?
3 meer is as / 3 more than 	5
4 minder is as / 4 less than 	3
4 minder is as / 4 less than 	4
6 meer is as / 6 more than 	7

2

Spring vorentoe of agtertoe. Jump forwards or backwards.	Waar is jy nou? Where are you now?
5 vorentoe / Forwards 5 	8
4 agtertoe / Backwards 4 	6
8 vorentoe / Forwards 8 	8
7 agtertoe / Backwards 7 	1

Learners do not need to show individual arrows for single hops.
It is good if they show the movement in one big hop (or other grouped hops).
The sooner they stop hopping in ones the better.

Numbers on a number line

Let learners alternate their starting points ... start at zero, then start at 10.

3 Vul die ontbrekende getalle in.
Fill in the missing numbers.

0	1	2	3	4	5	6	7	8	9	10
0	1	2	3	4	5	6	7	8	9	10
0	1	2	3	4	5	6	7	8	9	10
0	1	2	3	4	5	6	7	8	9	10

4 Vul die ontbrekende getalle in.
Fill in the missing numbers.

Do the same here

0 1 2 3 4 5 6 7 8 9 10

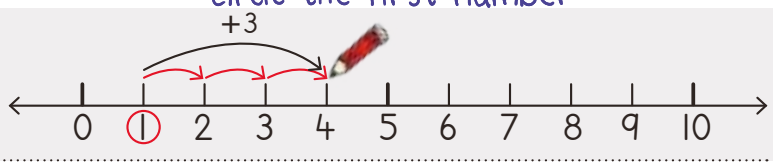
0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

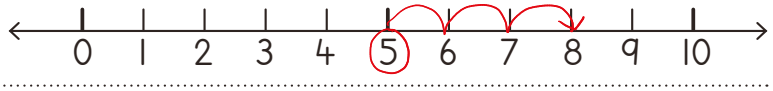
5 Tel op. Wys jou sprongе op die getallelyn.
Add. Show the steps on the number line.

Circle the first number

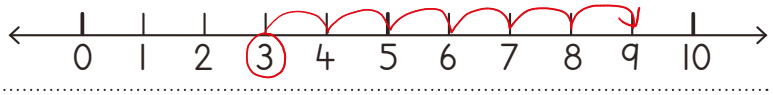
1 + 3 = 4



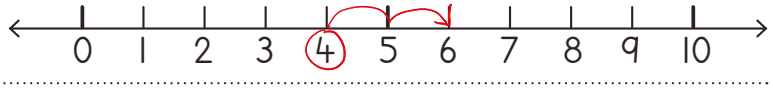
5 + 3 = 8



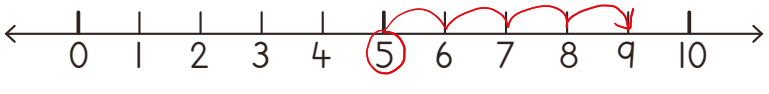
3 + 6 = 9



4 + 2 = 6



5 + 4 = 9



Tel by 9 by

HOOFREKENE (MENTAL MATHS) | KONSEPONTWIKKELING (CONCEPT DEVELOPMENT) → GROEPWERK (GROUP WORK) → SPELETJIE (GAME) → AKTIWITEITE (ACTIVITIES) → PROBLEEMOPLOSSING (PROBLEM SOLVING)

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Ons het gister met behulp van 'n getallelyn opgetel. Vandag gaan ons met 'n getallelyn en tienrame by 9 bytel.
Yesterday we used a number line to add. Today we are going to use a number line and ten frames to add 9.

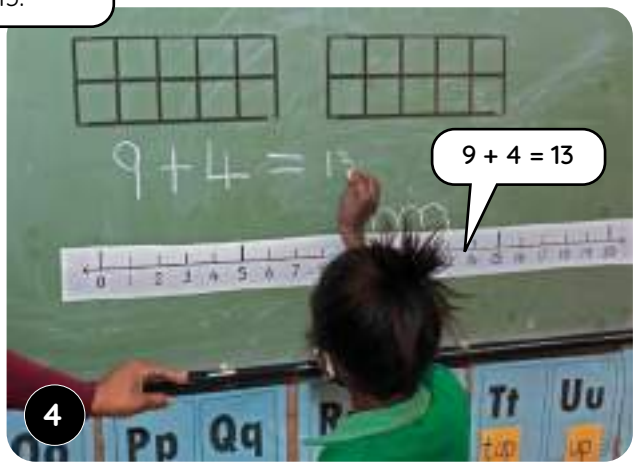


Kom ons wys 9 + 4 op die getallelyn.
Let's show 9 + 4 on the number line.

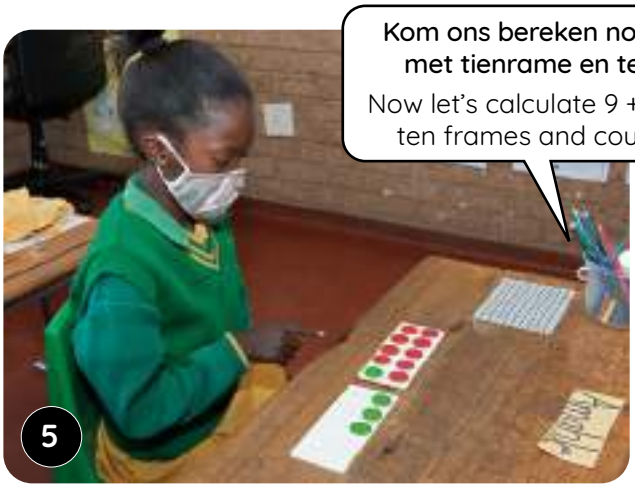


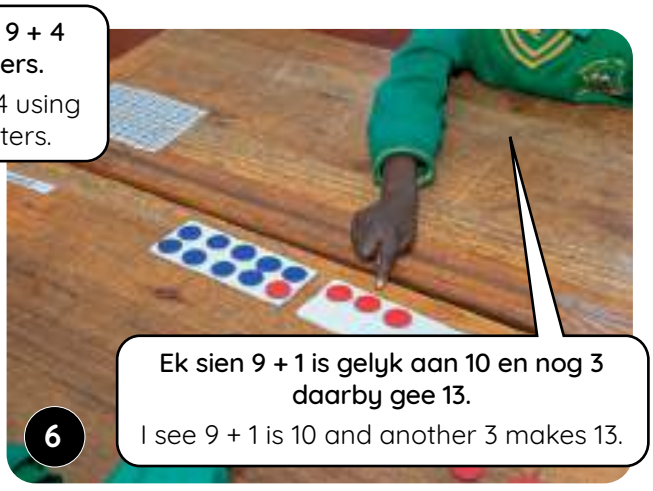
Ek maak 1 sprong van 9 tot 10 en dan nog 3 keer tot by 13.
I take 1 step from 9 to 10 and 3 more steps to 13.





Kom ons bereken nou 9 + 4 met tienrame en tellers.
Now let's calculate 9 + 4 using ten frames and counters.

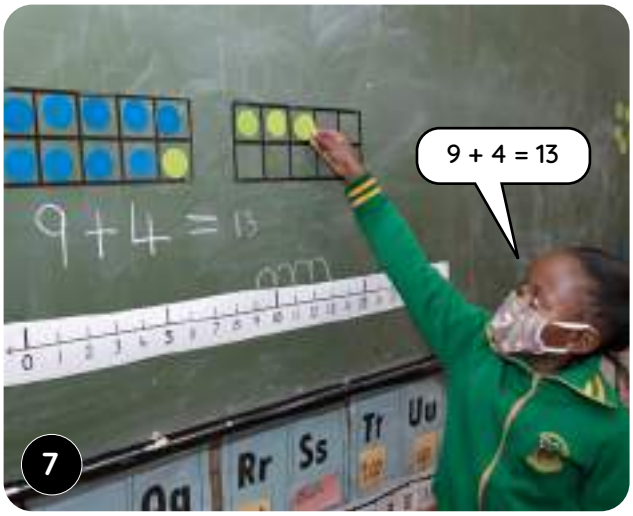




Ek sien 9 + 1 is gelyk aan 10 en nog 3 daarby gee 13.
I see 9 + 1 is 10 and another 3 makes 13.

Adding on to 9

Sit die magnetiese tellers op die tienrame op die bord.
Put the magnetic counters into the ten frames on the board.



Het julle dieselfde antwoord met behulp van die getallelyn en die tienrame gekry?
Did you get the same answer using the number line and the ten frame?



As ek een keer op die getallelyn spring, kom ek by 10 uit. As ek nog 3 keer spring, kom ek by 13 uit.
When I take one step along the number line, I get to 10 and then I step 3 more. I get to 13.



Herhaal albei metodes saam met die klas deur ander probleme te gebruik om by 9 by te tel, soos:

Repeat both methods together with the class using other adding to 9 problems, such as:

- **9 + 7**
- **9 + 5**
- **9 + 9**

Moedig die leerders aan om in te sien dat ons, met albei metodes, 'n tien maak deur 1 by te tel en dat ons dan by die finale antwoord uitkom.

Encourage learners to notice that in both methods, we first make a ten by adding 1 and then we get to the final answer.

Moedig die leerders aan om hul idees mee te deel en oor die verskillende probleme te gesels. Dit is belangrik dat hulle besef dis vinniger en makliker om 'n tien te maak as om te tel. As hulle 'n tien kry, kan hulle die berekening maklik in hul kop maak. Moedig hulle aan om hoofrekene te doen. Moedig die leerders aan om nie net in ene aan te spring nie. Hulle kan na die 10 groter sprongе maak om by die finale antwoord uit te kom.

Encourage learners to share ideas and talk about the different methods. It is important for them to realise that making a ten is quicker and simpler than counting. If they make a ten, they can do the calculation easily in their heads. Encourage them to do this mental calculation. Encourage learners not just to jump in ones. They can make bigger jumps after the 10 to get to the final answer.

Tel by 9 by

WEEK • WEEK 5

DAG 2 • DAY 2

Tel by 9 by
Adding on to 9

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

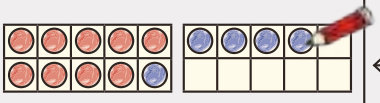
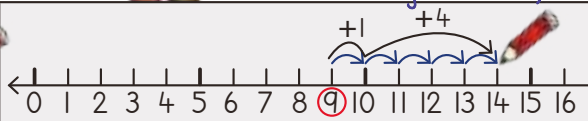
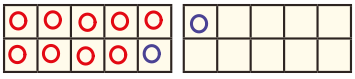
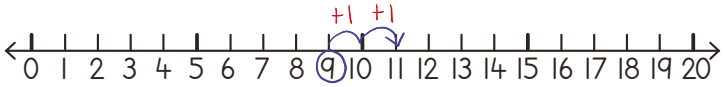
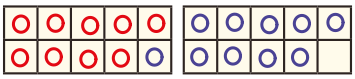
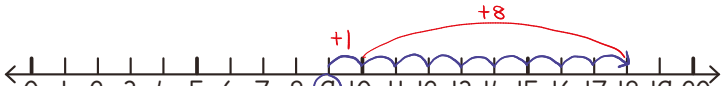
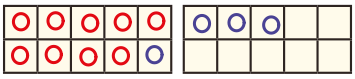
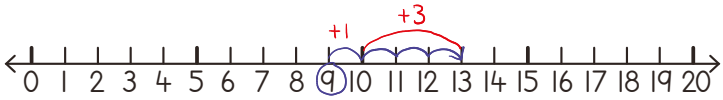
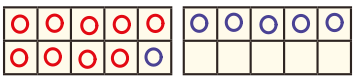
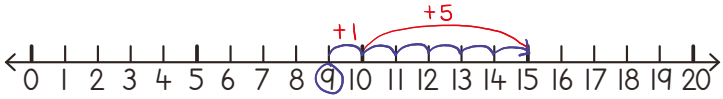
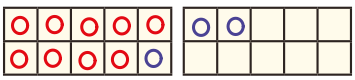
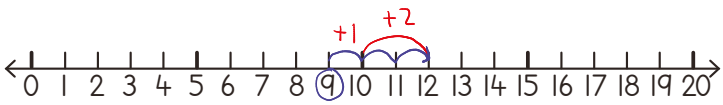
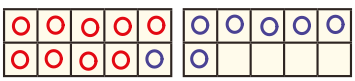
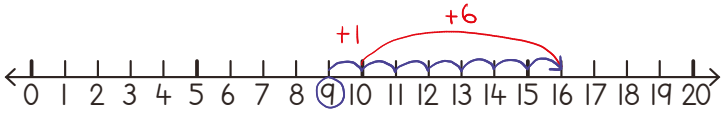
1 Tel op. Add.

Learners can hop in ones or using bigger hops. The sooner they stop hopping in ones the better.



Wat merk jy op as jy by 9 bytel?
What do you notice when you add on to 9?

We add one to get to ten, then we add the rest

 9 + 5 = 14	 9 + 5 = 14
 9 + 2 = 11	 9 + 2 = 11
 9 + 9 = 18	 9 + 9 = 18
 9 + 4 = 13	 9 + 4 = 13
 9 + 6 = 15	 9 + 6 = 15
 9 + 3 = 12	 9 + 3 = 12
 9 + 7 = 16	 9 + 7 = 16

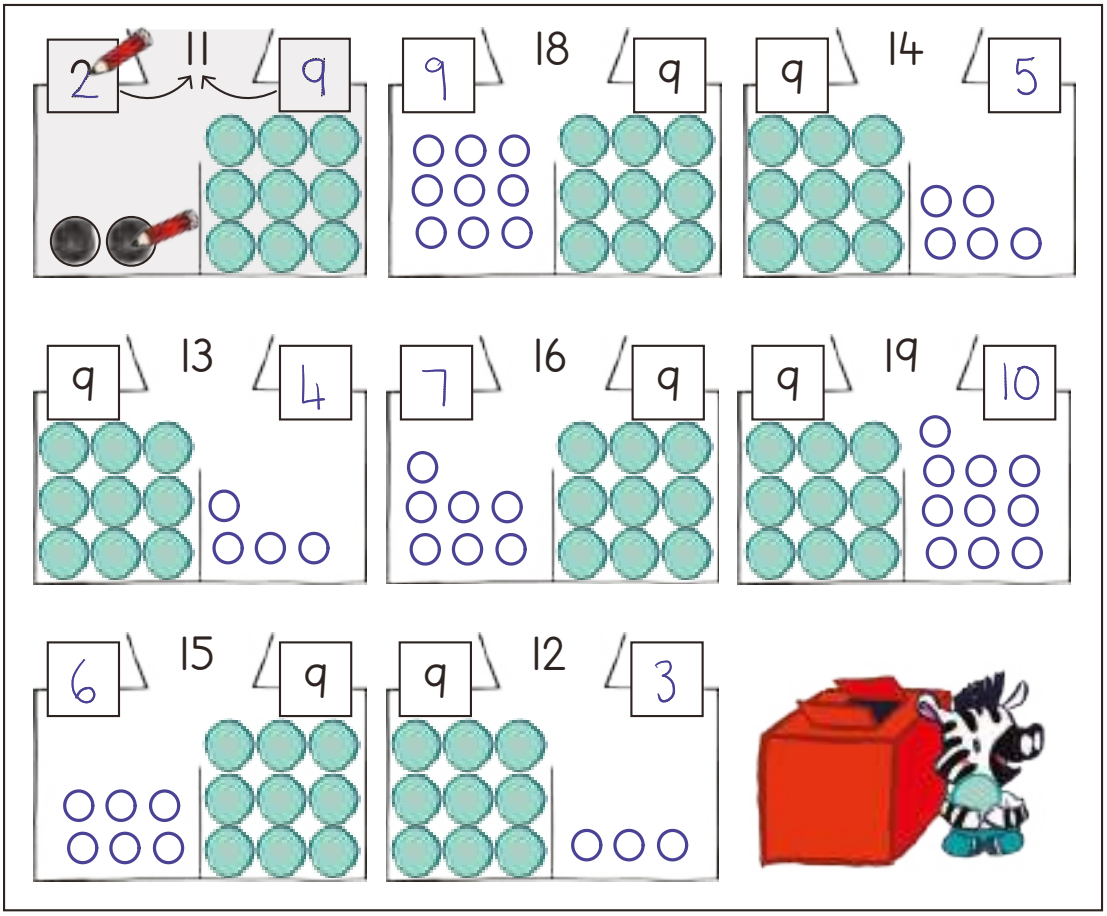
45

Adding on to 9

Get learners to talk about the pattern

2 Hoeveel balle moet bygetel word om die boonste getal te kry?

How many balls must be added to make the top number?



3 Los die probleme op deur die ontbrekende getalle in te vul.

Fill in the missing numbers to solve these problems.

9 + 9 = 18	9 + 4 = 13	9 + 5 = 14
9 + 2 = 11	9 + 7 = 16	9 + 10 = 19
9 + 6 = 15	9 + 3 = 12	9 + 1 = 10
9 + 5 = 14	9 + 2 = 11	9 + 6 = 15
9 + 4 = 13	9 + 7 = 16	9 + 3 = 12

Tel by 8 en 7 by

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEEMOPLOSSING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Ons het gister met behulp van getallelyne en tienrame by 9 bygetel. Vandag gaan ons by 8 en 7 bytel. Kom ons begin om by 8 by te tel.

Yesterday we used number lines and ten frames to add on to 9. Today we are going to add on to 8 and 7. Let's start with adding on to 8.





Ons het 8 tellers en 6 tellers.

We have 8 counters and 6 counters.

Ek sien 8 + 2 is gelyk aan 10 en nog 4 maak 14.

I see 8 + 2 is 10 and another 4 makes 14.

Hoe kan julle die probleem 8 + 6 op die getallelyn oplos?

How can you solve the problem 8 + 6 on the number line?





Ek spring 2 keer van 8 tot 10 en nog 4 keer tot by 14.

I take 2 steps from 8 to 10 and 4 more steps to 14.

Herhaal albei metodes saam met die klas deur ander probleme te gebruik om by 8 en 7 by te tel, soos:

Repeat both methods together with the class using other adding to 8 and 7 problems, such as:

- **8 + 4**
- **8 + 9**
- **7 + 6**
- **7 + 7**

Moedig die leerders aan om in te sien dat ons, sodra ons by 8 bytel, 10 kan maak deur eers 2 daarby te tel. Dit is dan maklik om die res by te tel. Wanneer ons by 7 bytel, tel ons eers 3 by om 10 te maak en dan tel ons die res by.

Encourage learners to notice that when we add to 8, we can make 10 by first adding 2. Then it is easy to add the rest. When we add to 7, we add 3 to make 10, then add on the rest.

Adding on to 8 and 7

WEEK • WEEK 5

DAG 3 • DAY 3

Tel by 8 en 7 by
Adding on to 8 and 7

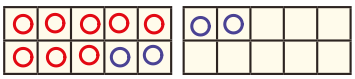
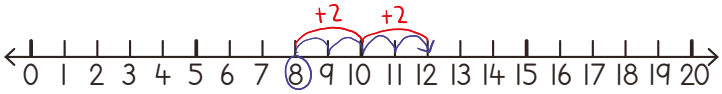
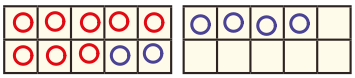
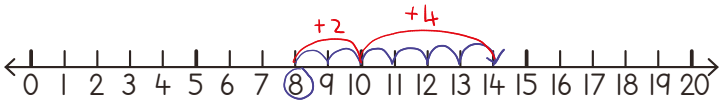
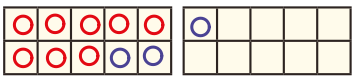
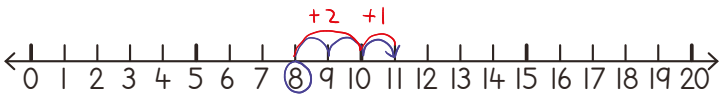
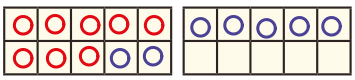
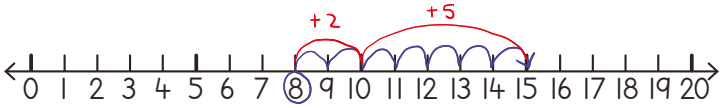
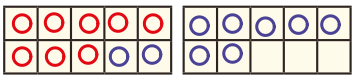
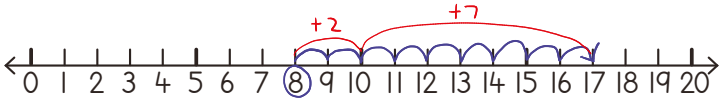
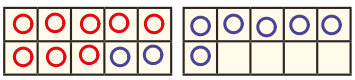
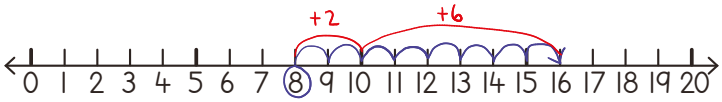
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Tel op.
Add.



We first add 2 to get to 10 then add the rest

Wat merk jy op as jy by 8 bytel?
What do you notice when you add on to 8?

 8 + 5 = 13	 8 + 5 = 13
 8 + 4 = 12	 8 + 4 = 12
 8 + 6 = 14	 8 + 6 = 14
 8 + 3 = 11	 8 + 3 = 11
 8 + 7 = 15	 8 + 7 = 15
 8 + 9 = 17	 8 + 9 = 17
 8 + 8 = 16	 8 + 8 = 16

47

Tel by 8 en 7 by

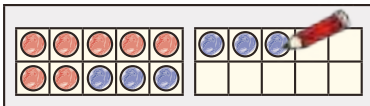
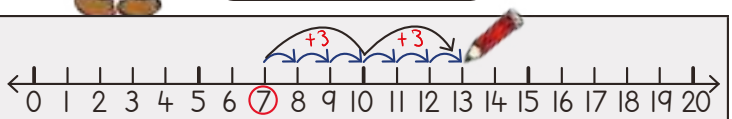
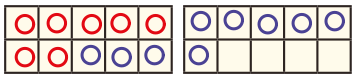
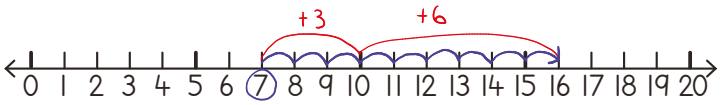
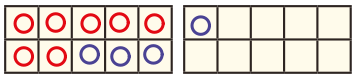
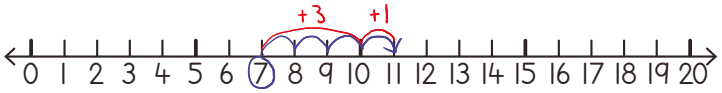
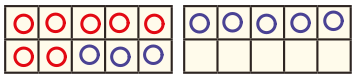
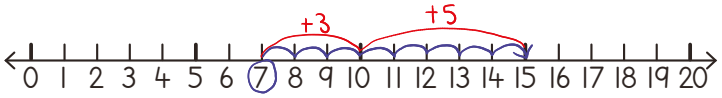
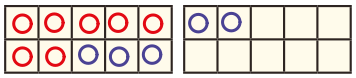
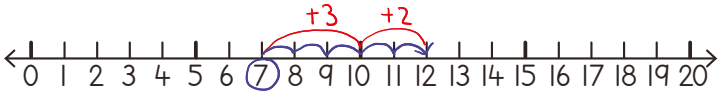
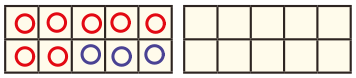
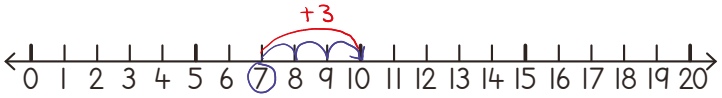
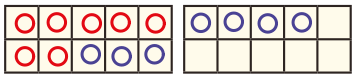
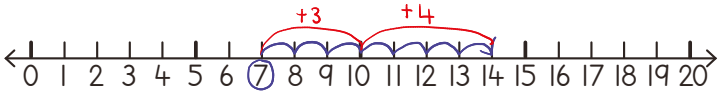
Learners do not have to count in ones.
They should start using bigger hops by jumping to a ten first.

2 Tel op.
Add.



Wat merk jy op as jy by 7 bytel?
What do you notice when you add on to 7?

We first add 3 to get to 10, then add the rest

 7 + 6 = 13	 7 + 6 = 13
 7 + 9 = 16	 7 + 9 = 16
 7 + 4 = 11	 7 + 4 = 11
 7 + 8 = 15	 7 + 8 = 15
 7 + 5 = 12	 7 + 5 = 12
 7 + 3 = 10	 7 + 3 = 10
 7 + 7 = 14	 7 + 7 = 14

Addition patterns

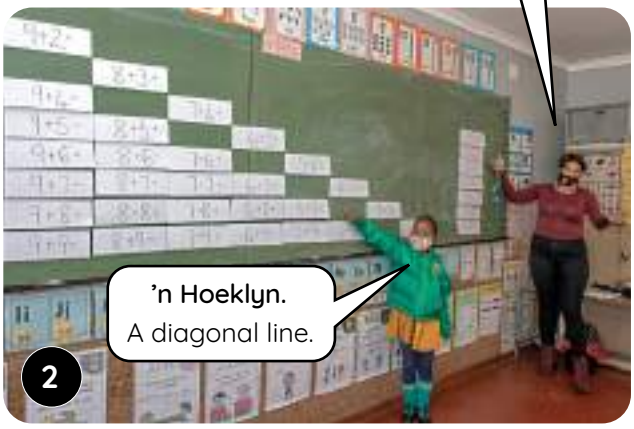
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons kyk na die optellingspatrone. Kry al die getalsinne wat 12 as antwoord het.
Let's look at addition patterns. Find me all the number sentences that have the answer 12.



Watter patroon sien julle in die tabel raak nadat julle die kaarte met 12 as antwoord uitgehaal het?
What pattern do you see in the table after taking out the cards that have the answer 12?



Wat merk julle op?
What do you notice?



Die getalle links van die plusteken word kleiner met 1 namate jy afbeweeg.
The numbers on the left of the plus sign get smaller by 1 as you go down.

Kom ons soek na nog 'n patroon.
Let's find another pattern.



Die getalle regs van die plusteken word groter met 1 namate jy afbeweeg.
The numbers on the right of the plus sign get bigger by 1 as you go down.

Gaan op hierdie manier deur elkeen van die optellingskaarte sodat die leerders die patrone in die optellingsgetalsinne kan raaksien. Gee baie geleenthede aan hulle om die patrone wat hulle raaksien, te verduidelik. Dit gee hulle kans om hul redeneringsvaardighede in wiskunde te ontwikkel.

Go through each of the addition cards in this way so that learners can see the patterns in the addition number sentences. Allow the learners many opportunities to explain the patterns they see. This will give them the chance to develop their mathematical reasoning skills.

WEEK • WEEK 5

DAG 4 • DAY 4

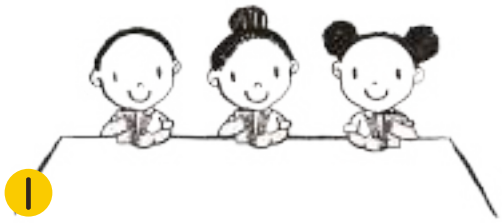
Optellingspatrone
Addition patterns

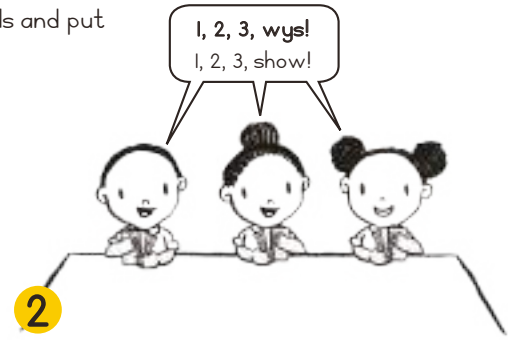
HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

Speletjie: 1, 2, 3, wys! – optelling
Game: 1, 2, 3, show! – addition

Speel met die getalkaarte 0 tot 5. Skommel julle kaarte en sit dit met die gesig na onder op die skoolbank neer.

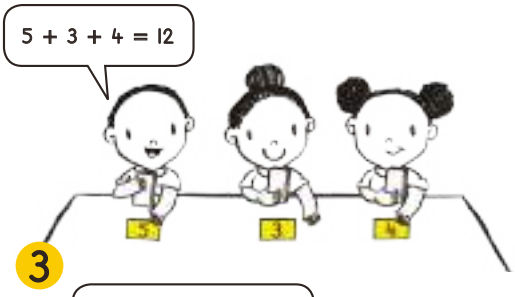
Play with the number cards 0–5. Shuffle your cards and put them face down on the desk.

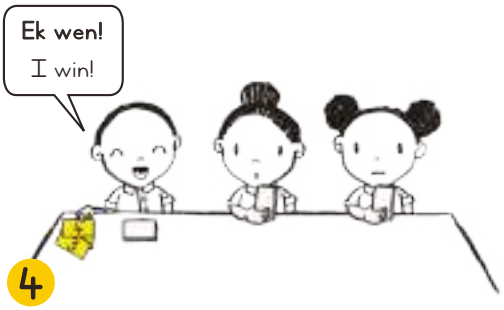




Die eerste leerder wat die getalle bymekaartel en die antwoord uitroep, hou die kaarte.

The first person to add the numbers and call out the answer keeps the cards.





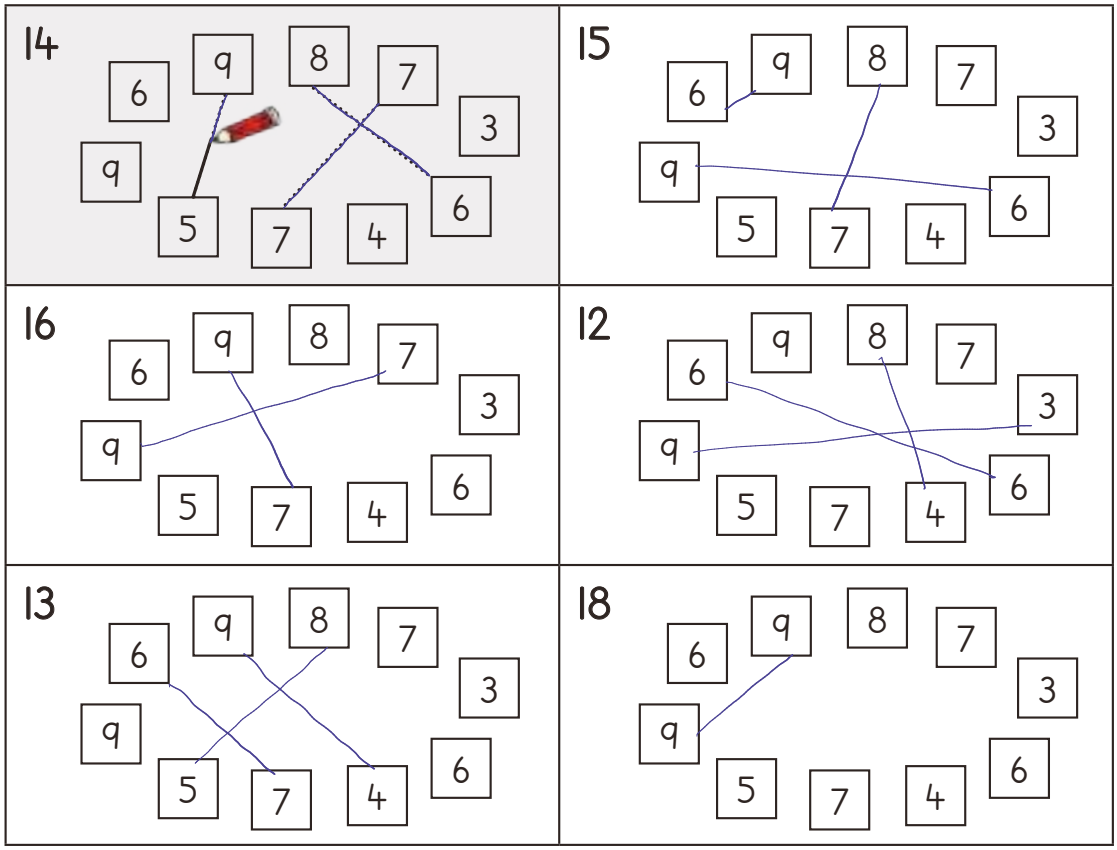


Die leerder met die meeste kaarte aan die einde is die wenner van die speletjie.

The learner with the most cards at the end wins the game.

Addition patterns

1 Verbind 2 getalle om die antwoord in die linkerhoek te kry.
Join 2 numbers to get the answer in the left corner.



2 Los die probleem op en kleur dan die antwoord aan die onderkant in.
Solve the problem and then colour the answer on the bottom line.

7 + 4 = 11	6 + 6 = 12
8 + 6 = 14	7 + 8 = 15
9 + 8 = 17	9 + 9 = 18
8 + 8 = 16	8 + 9 = 17
7 + 6 = 13	5 + 8 = 13
3 + 7 = 10	7 + 7 = 14

7 8 9 10 11 12 13 14 15 16 17 18

Assessering en vaslegging

WEEK • WEEK 5

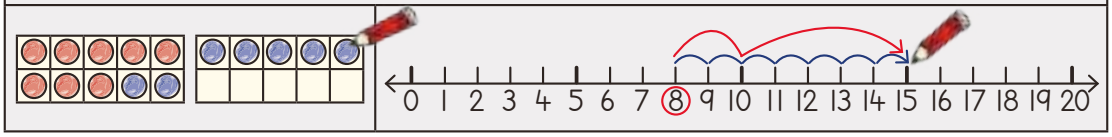
DAG 5 • DAY 5

Vaslegging
Consolidation

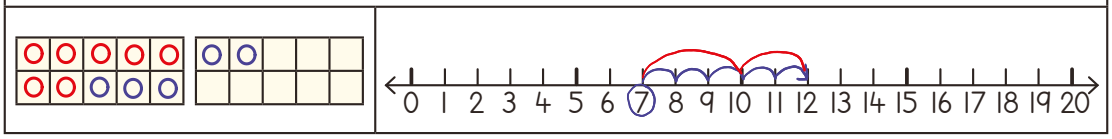
HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Tel op met behulp van die tienraam en die getallelyn.
Add using the ten frame and number line.

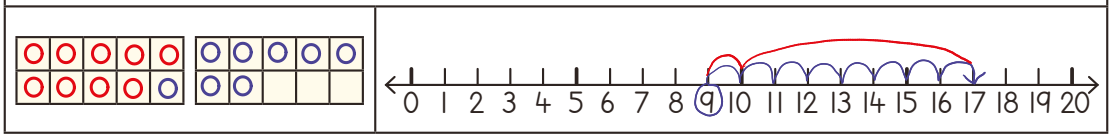
8 + 7 = 15



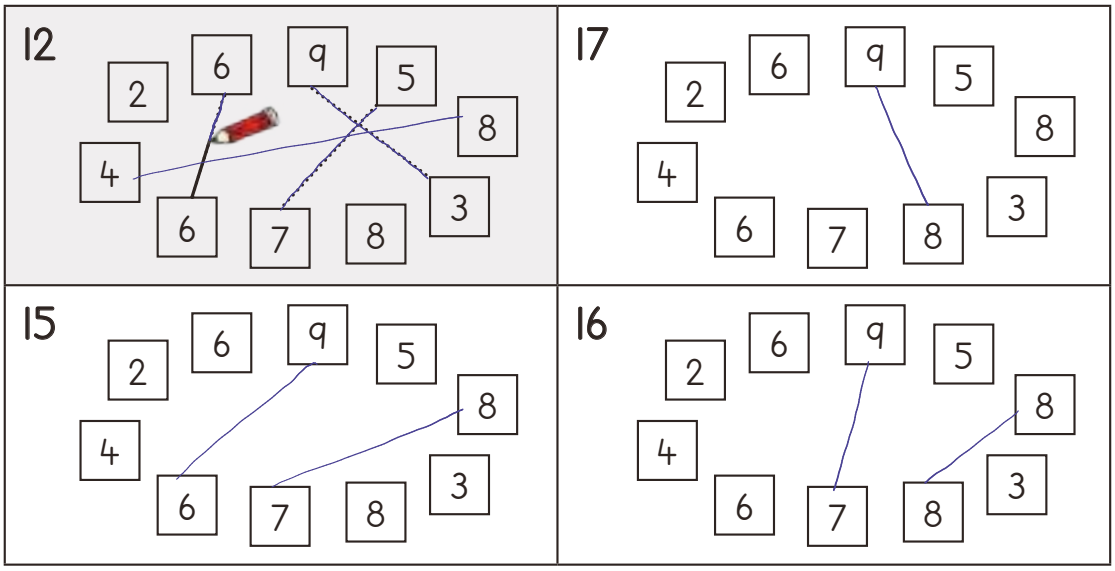
7 + 5 = 12



9 + 8 = 17



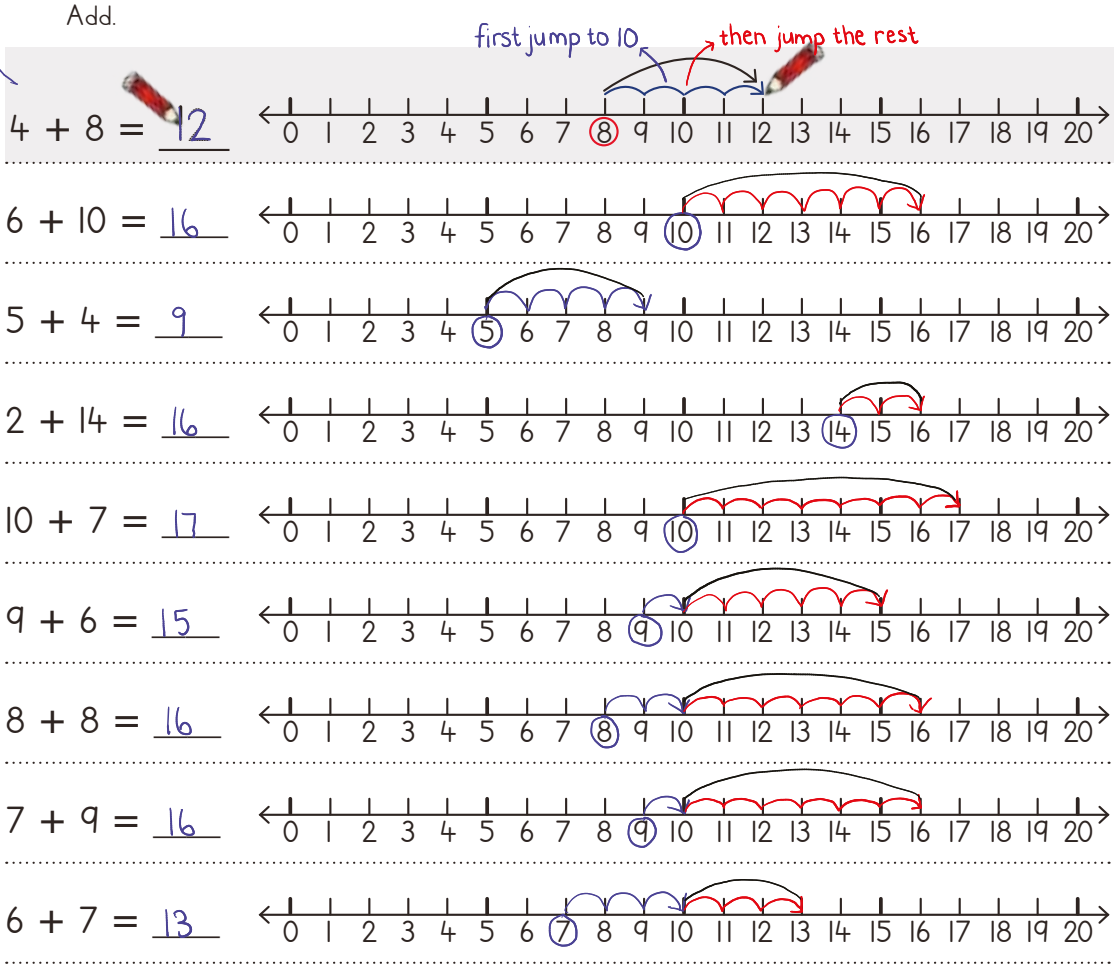
2 Verbind 2 getalle om die antwoord in die linkerhoek te kry.
Join 2 numbers to get the answer in the left corner.



Assessment and consolidation

show the class that "add on from the larger number" was done on the number line, that is 8 + 4

3 Tel op.
Add.



4 Kry die getalle en tel dit bymekaar.
Find the numbers and add.

♥ = 9	✿ = 8	🍃 = 7	☾ = 6	★ = 5

♥ + 🍃 9 + 7 = 16	✿ + 🍃 8 + 7 = 15
✿ + ★ + ★ 8 + 5 + 5 = 18	♥ + ☾ + ★ 9 + 6 + 5 = 20

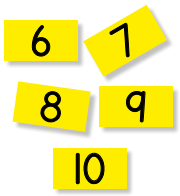
Optelling met oorbrugging van 10

	Hulpbronne
Hoofrekene: Optelling met 1, 2, 3, wys! – optelling (een hand)	geen
Speletjie: Ek is uit!	getalkaarte 0 tot 10; dobbelstene







Dag	Lesaktiwiteit	Leshulpbronne
1	Optelling met oorbrugging van 10	LB, twee tienrame, 20 tellers
2	Optelling met oorbrugging van 10	LB, getallelyn (onderwyser), twee tienrame, 20 tellers
3	Optellingswoordprobleme	LB, twee tienrame, 20 tellers
4	Optellingstories	LB, twee tienrame, 20 tellers, getalkaarte 1 tot 10
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Optellingsprobleme wat **10 oorbrug**, op te los deur 'n tien te maak	
Optellingswoordprobleme wat oorbrugging van 10 behels, op te los	
Stories vir optellingsprobleme wat 10 oorbrug, uit te dink om hulle te help om 'n begrip van **woordprobleme** te ontwikkel	

Formele assessering (verwys na die Assesseringsboek)

Skriftelike assessering: Getalle, Bewerkings en Verwantskappe – Probleme wat optelling met oorbrugging van 10 en getalsinne behels

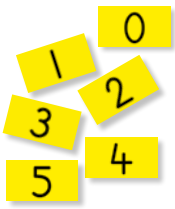
Mondelinge en praktiese assessering: Getalle, Bewerkings en Verwantskappe – Neem die leerders waar om hul vermoë om met getallelyne en tienrame te werk, te assesseer

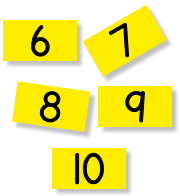
Addition bridging 10

	Resources
Mental Maths: 1, 2, 3, show! – addition (one hand)	none
Game: All over!	number cards 0–10; dice







Day	Lesson activity	Lesson resources
1	Addition bridging 10	LB, two ten frames, 20 counters
2	Addition bridging 10	LB, number line (teacher), two ten frames, 20 counters
3	Addition word problems	LB, two ten frames, 20 counters
4	Addition stories	LB, two ten frames, 20 counters, number cards 1–10
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Solve **addition problems** that **bridge 10** by making a ten	
Solve addition word problems that involve bridging 10	
Create stories for addition problems that bridge 10, to assist in developing an understanding of **word problems**	

Formal assessment (see the Assessment Booklet)

Written assessment: Numbers, Operations and Relationships – Addition bridging 10 problems and number sentences

Oral and practical assessment: Numbers, Operations and Relationships – Observe learners to assess their ability to work with number lines and ten frames

Optelling met oorbrugging van 10

Hoofrekene

Ons konsentreer hierdie week op **getalkombinasies** van 10 en wys met ons vingers die samevoegings van die getalkombinasies. Maak seker die leerders word aktief by die les betrek. Dit sal hulle help om eenvoudige optellingsprobleme vinnig en doeltreffend met hul vingers op te los en hul getalfeite in 'n later stadium te kan herroep.



Speletjie

Ek is uit!



Konsepontwikkeling

Ons konsentreer hierdie week op **optelling met oorbrugging van 10**, **optellingswoordprobleme** en **optellingstories**. Die leerders versterk wat hulle uit die oplossing van probleme rakende optelling met oorbrugging van 10 geleer het. Terwyl ons met optelling werk, konsentreer ons daarop om:



- probleme rakende optelling met oorbrugging van 10 met behulp van tienrame en getallelyne op te los. Die leerders moet insien dat dit makliker en vinniger is om probleme op te los as hulle eers 'n tien maak sodra hulle met 9, 8, 7 en 6 moet optel.
- probleme met behulp van tellers en tienrame op te los en sodoende 'n begrip van **plekwaarde** by die leerders te laat ontwikkel.
- optelling met oorbrugging van 10 te oefen deur woordprobleme te gebruik om 'n konteks te gee. Laat die leerders hul oplossingsmetodes met mekaar bespreek sodat hulle sodoende gedagtes uitruil en hul eie begrip verder kan uitbou.
- stories oor optelling met oorbrugging van 10 uit te dink. Dit stel die leerders in staat om in konteks met getalle te werk en dra daartoe by dat wiskunde vir hulle meer tersaaklik word.

Waarna jy hierdie week moet oplet

- Help die leerders om te besef dat hulle, deur 'n tien te maak om optellingsprobleme op te los, 'n meer doeltreffende manier het om probleme op te los as om bloot te tel.
- Moedig die leerders aan om in te sien dat dit vinniger is om 'n 10 te maak deur die kleiner getalle af te breek ten einde die groter getalle tot 10 op te bou. Die leerders moet besef dat hulle die eerste of die tweede getal kan afbreek, watter een ook al vir hulle makliker is. Die leerders moet die getal waarmee hulle 10 kan maak, maklik kan identifiseer.
- Moedig die leerders aan om aandagtig na die optellingstories te luister en help hulle om die toepaslike inligting te identifiseer.
- Moedig gesprekke onder die leerders aan sodat hulle hul oplossingsmetodes onder mekaar kan uitruil. Maak seker dat die leerders die korrekte woordeskat (**ene**, **'n tien**, **tel op**, **en**, **meer**) gebruik.

Addition bridging 10

Mental Maths

We focus on the bonds of 10 this week and use our fingers to show the **number bond combinations**. Learners can be actively involved in the lesson which will help them solve simple addition problems quickly and efficiently. It will also help them recall their number facts at a later stage.



Game

All over!



Concept development

This week we focus on **addition bridging 10**, **addition word problems** and **addition stories**. Learners will reinforce what they have learnt about solving addition problems that bridge ten. In our work on addition, we will focus on:



- solving addition bridging 10 problems by making a ten using ten frames and number lines. Learners will realise that making a ten when adding with 9, 8, 7 and 6 makes it easier and quicker to solve problems.
- solving problems by using counters and ten frames, which begins to develop an understanding of **place value**.
- practising addition bridging 10, using word problems to create a context. Allow learners to discuss their solution methods so that they can share ideas and further develop their own understanding.
- creating stories for addition bridging 10. This allows learners to work with numbers in a context, helping maths to become more relevant.

What to look out for this week

- Help learners to recognise that making a ten to solve addition problems is a more efficient way of solving problems than counting.
- Encourage learners to realise that it is quicker to make 10 by breaking down the smaller number so that it is easy to build the bigger number up to ten. Learners must realise that you can break down the first or the second number, whichever one makes it easier. It is important that learners can identify the number that can be used to make 10 easily.
- Encourage learners to listen carefully to the addition stories and help them to identify the relevant information.
- Encourage conversation between learners so that they can share their solution methods. Ensure that learners are using the correct vocabulary (**ones**, **a ten**, **add**, **and**, **more**).

Optelling met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Speel die speletjie, 1, 2, 3, wys! – optelling. Sien bladsy 64.

Play the 1, 2, 3, show! – addition. See page 64.

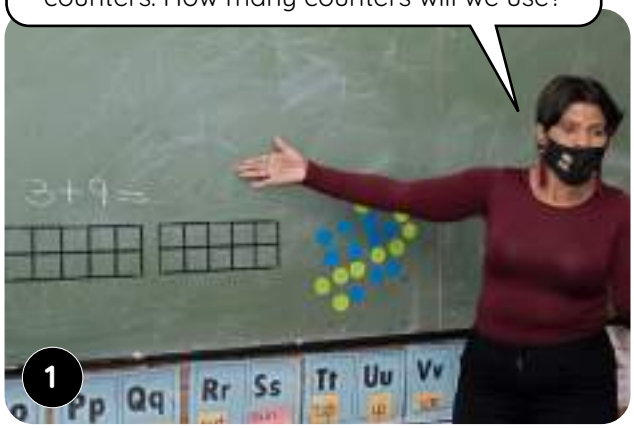
Onthou om elke dag die datum na te gaan en die register af te merk

Remember to check the date and mark the register every day.

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons bereken 3 + 9 met twee tienrame en tellers. Hoeveel tellers gaan ons gebruik?

Let's calculate 3 + 9 using a ten frame and counters. How many counters will we use?



1

Ons het 3 tellers en 9 tellers nodig.

We need 3 counters and 9 counters.

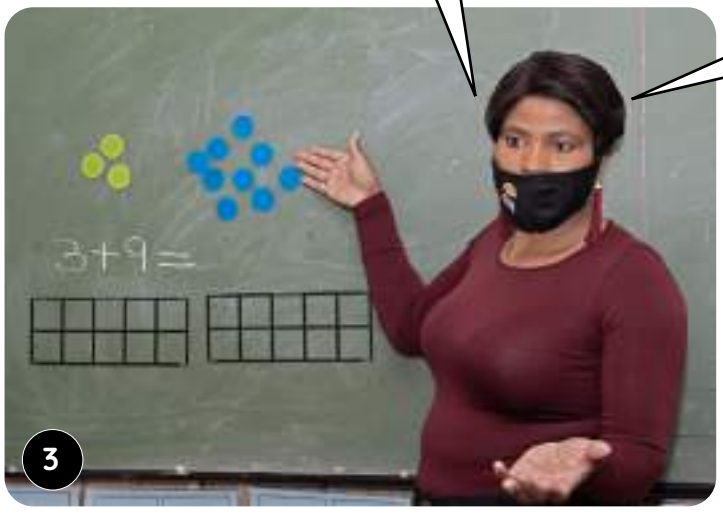

2

Ons het laas week opgetel deur 'n tien te maak. Watter getal moet ons hier gebruik om 'n tien makliker te kry?

Last week we added by making a ten. Which number should we use here to make a ten more easily?

9, want dis nader aan 10 en dis daarom vinniger om 'n tien te maak.

9, because it's closer to 10, so it is quicker to make a ten.



3

Moedig die leerders aan om oor die oplossingsmetodes te gesels aangesien dit hulle sal help besef dat dit vinniger en eenvoudiger is om 'n tien te maak as om te tel.

Encourage learners to talk about the solution methods to help them realise that making a ten is quicker and simpler than counting.

Addition bridging 10

Ons het 9 tellers en 3 tellers.
We have 9 counters and 3 counters.

Ons sit dit soos volg by die tienrame in.
We put them into the ten frames like this.



9 en 1 maak 10, wat beteken die eerste tienraam word volgemaak.
9 and 1 makes 10, which fills the first ten frame.



Daar is 2 tellers in die tweede tienraam. Wat is 9 + 3?
There are 2 counters in the second ten frame. What is 9 + 3?





Laat die leerders oefen om probleme op te los, waar hulle bespreek watter getal gebruik moet word om 'n tien te maak. Dit is makliker om 'n tien met die groter getal te maak. Verander die volgorde van die getalle om met die grootste getal te begin, indien nodig. 3 + 9 = ____ kan byvoorbeeld as 9 + 3 = ____ geskryf word. Hulle kan die volgende doen om dit te oefen:

Allow learners to practise doing problems where they discuss which number should be used to make a ten. It is easier to make a ten using the bigger number. Change the order of the numbers to start with the bigger number when you need to. For example: 3 + 9 = ____ would be 9 + 3 = ____. They can do these to practise:

5 + 8 = ____ 2 + 9 = ____ 3 + 8 = ____ 5 + 9 = ____ 4 + 8 = ____

WEEK • WEEK 6

DAG 1 • DAY 1

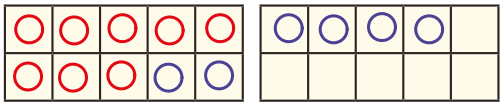
Optelling met oorbrugging van 10
Addition bridging 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

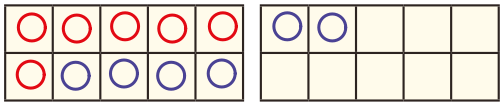
1 Los op deur tien te maak.
Make a ten to solve. 'Add on from the larger number' still being done here.



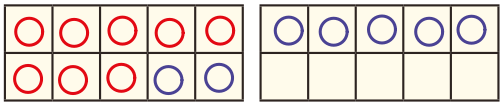
9 + 5 = 14



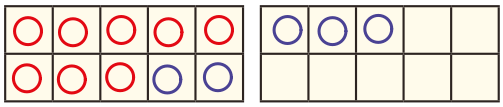
8 + 6 = 14



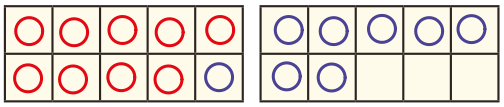
6 + 6 = 12



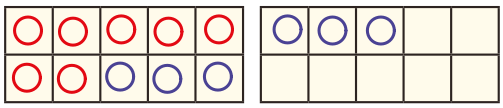
7 + 8 = 15



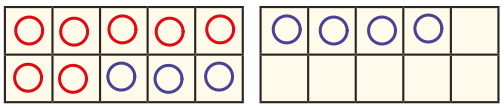
5 + 8 = 13



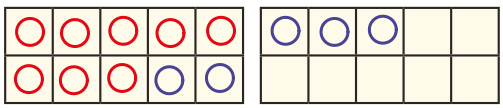
8 + 9 = 17



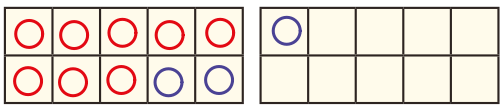
7 + 6 = 13



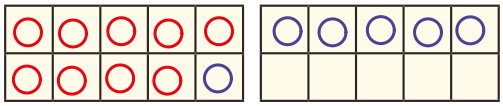
7 + 7 = 14



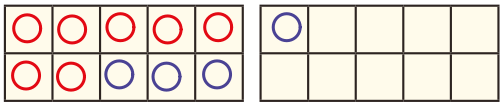
8 + 5 = 13



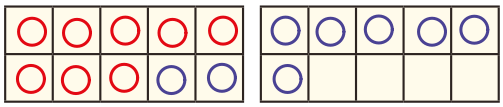
3 + 8 = 11



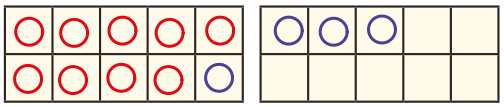
6 + 9 = 15



4 + 7 = 11



8 + 8 = 16

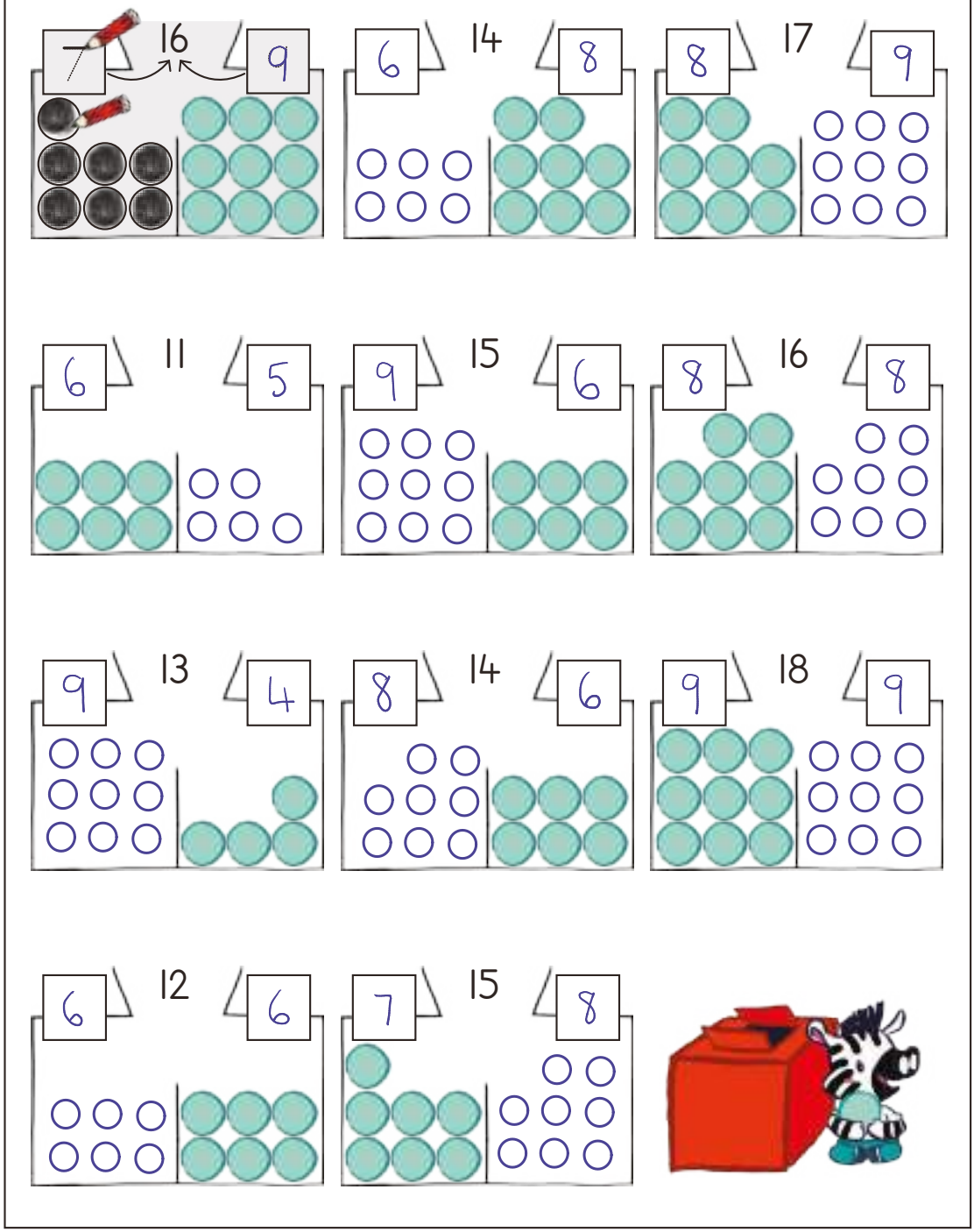


4 + 9 = 13

Addition bridging 10

2 Hoeveel balle moet bygetel word om die boonste getal te kry?

How many balls must be added to make the top number?



Optelling met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons kry die ontbrekende getal:
7 + ____ = 11.
Let's find the missing number:
7 + ____ = 11.



Ek kan van 7 tot 10 op die getallelyn spring.
I can step on the number line from 7 up to 10.





Ek spring 3 keer om by 10 uit te kom. Dit is dan nog een sprong na 11.
I take 3 steps to get to 10. One more step to 11.

Dit is altesaam 4 spronge.
That's 4 steps altogether.

Sit tyd opsy dat die leerders die gebruik van die getallelyn kan bespreek om die ontbrekende getal te kry. Los baie ander probleme op dieselfde manier op. Byvoorbeeld:

Allow time for learners to discuss the use of the number line to find the missing number. Solve many other problems in the same way. For example:

- **8 + ____ = 15**
- **9 + ____ = 11**
- **7 + ____ = 14**
- **8 + ____ = 13**

Addition bridging 10

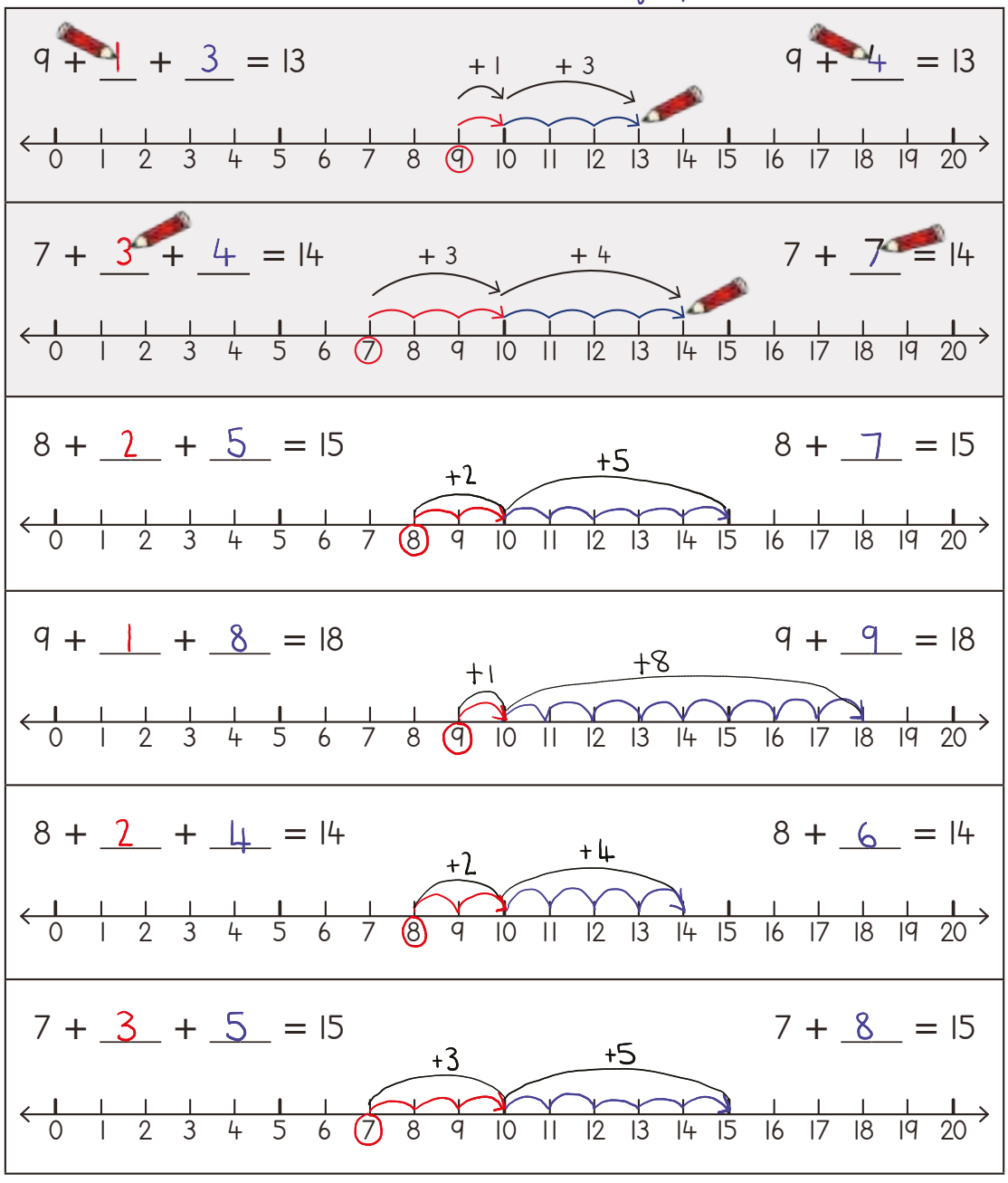
WEEK • WEEK 6

DAG 2 • DAY 2

Optelling met oorbrugging van 10
Addition bridging 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

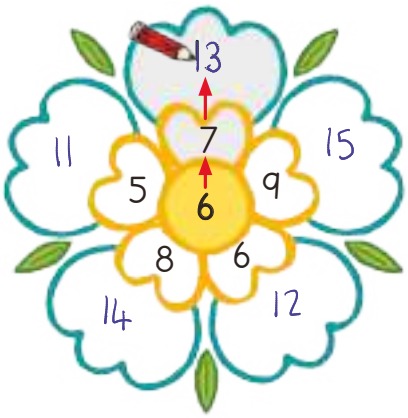
1 Kry die ontbrekende getalle met behulp van die getallelyne.
Use the number lines to find the missing numbers. First jump to 10

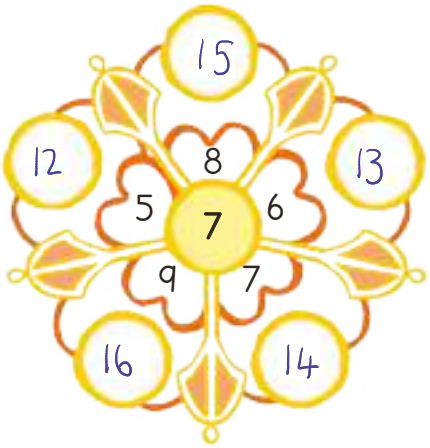


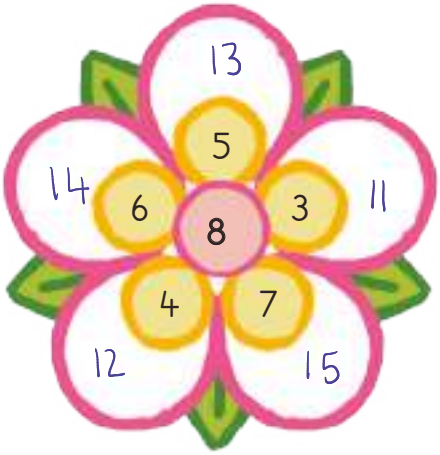
Optelling met oorbrugging van 10

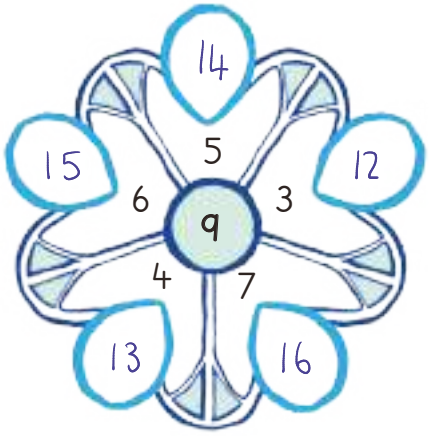
Get learners to answer orally before completing this task

2 Tel op.
Add.











0 1 2 3 4 **5** 6 7 8 9 **10** **11** **12** **13** **14** **15** **16** 17 18 19 **20**

3 Tel op.
Add.

6 + 5 = 11	7 + 7 = 14	9 + 9 = 18
6 + 6 = 12	8 + 7 = 15	7 + 9 = 16
7 + 6 = 13	8 + 8 = 16	6 + 9 = 15

Addition word problems

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Daar is 9 kinders op die speelterrein. 5 kinders kom sluit by hulle aan. Hoeveel kinders is daar nou altesaam?
There are 9 children in the playground. 5 children come and join in. How many children are there altogether now?



Kom ons kry die oplossing vir die probleem met tienrame en tellers.
Let's use ten frames and counters to find the solution to the problem.

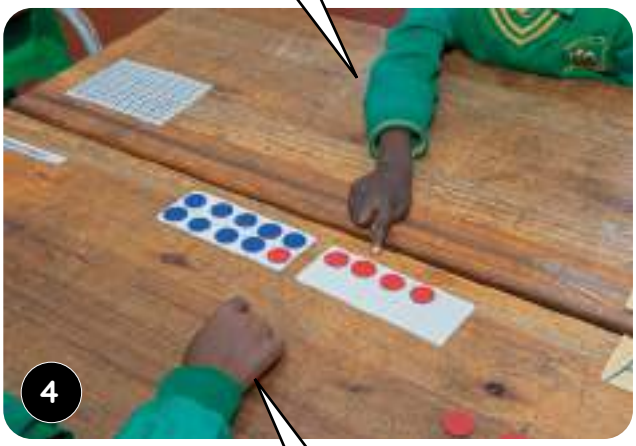


Daar is 9 kinders. Dan kom daar nog 5 kinders by.
There are 9 children. Then 5 more children arrive.



Ons sit 9 tellers soos volg by die tienraam in.
We put 9 counters on the ten frame like this.

Ons sit nog 1 teller in om 'n hele tien te maak.
We add 1 more to make a full ten.



Daar bly 4 tellers oor wat ons by die ander tienraam insit. Daar is dus altesaam 14 kinders.
We have 4 counters left which we put in the other ten frame. So, there are 14 children altogether.

Herhaal die stappe met ander optellingswoordprobleme. Gee die leerders baie geleenthede om probleme rakende optelling met oorbrugging van 10 op te los.

Repeat the steps with other addition word problems. Give the learners lots of opportunities to solve addition problems that bridge 10.

Optellingswoordprobleme

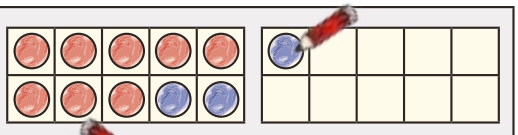
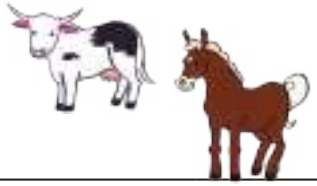
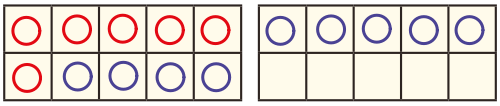
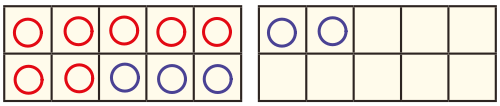
WEEK 6 • WEEK

DAG 3 • DAY 3

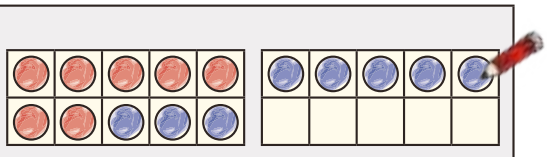
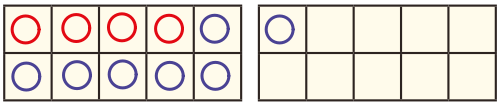
Optellingswoordprobleme
Addition word problems

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Hoeveel is daar altesaam? Los die probleme met behulp van die tienrame op.
Some learners may put the larger number first. They may write the number sentence in any order.
How many altogether? Solve these problems using the ten frames.

3 skape 3 sheep 8 varke 8 pigs 	 8 + 3 = 11
6 koeie 6 cows 9 perde 9 horses 	 6 + 9 = 15
7 katte 7 cats 5 honde 5 dogs 	 7 + 5 = 12

2

Daar is 7 koeie op die plaas. Daar is 8 skape op die plaas. Hoeveel diere is daar op die plaas? There are 7 cows on the farm. There are 8 sheep on the farm. How many animals on the farm? 	 7 + 8 = 15
Daar is 4 perde op die plaas. Daar is 7 skape op die plaas. Hoeveel diere is daar op die plaas? There are 4 horses on the farm. There are 7 sheep on the farm. How many animals on the farm? 	 4 + 7 = 11

57

Addition word problems

Encourage adding on. Learners might add on by making a ten and adding the rest. This helps them start bridging ten mentally.

3 Tel by die getal op die boks by.
Add to the number in the box.

9 + ●●● = 12	8 + ●● ●● = 12
7 + ●● ● = 11	6 + ●● ●● ●● = 14
9 + ●● ●● ● = 16	8 + ●● ●● ●● = 16

4 Skryf die getalle in en tel dit bymekaar.
Write in the numbers and add.

= 9 = 8 = 7 = 6 = 5 = 4

+ + 9 + 4 + 4 = 17	+ + 8 + 5 + 5 = 18
+ + 8 + 6 + 6 = 20	+ + 7 + 5 + 6 = 18
+ + 7 + 7 + 4 = 18	+ + 8 + 8 + 4 = 20

Optellingstories

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEEMOPLOSSING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT



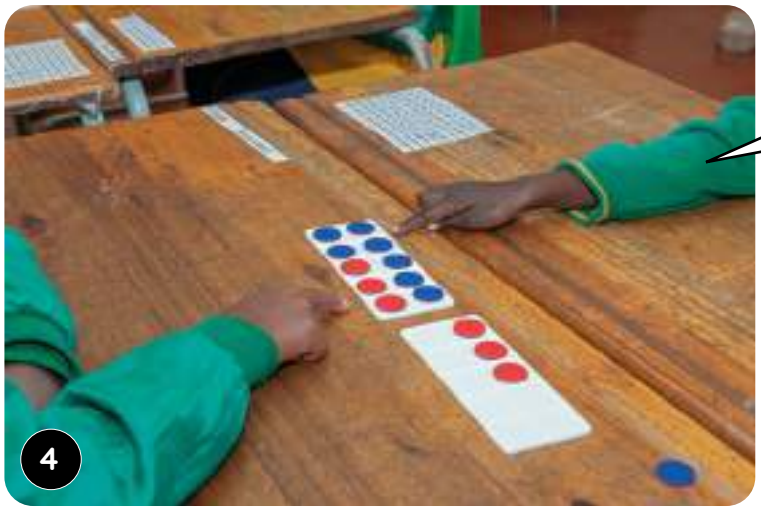


Kom ons los die probleem met tienrame en tellers op.
Let's use ten frames and counters to solve the problem.

Addition stories

Ons kan 7 tellers soos volg by die tienraam insit.
We can put 7 counters on the ten frame like this.





Ek sit 3 by die eerste tienraam in om 'n hele tien te maak. Daar bly 3 tellers oor, wat ek by die tweede tienraam insit.
I add 3 to the first ten frame to make a full ten. I have 3 counters left which I put in the second ten frame.

Dit beteken dus dat daar altesaam 13 lekkers is.
So that means there are 13 sweets altogether.



Herhaal die stappe met ander optellingswoordprobleme. Gee die leerders baie geleenthede om hul eie stories uit te dink wat lei tot eenvoudige optellingsgetalsinne wat tien oorbrug.

Repeat the steps with other addition word problems. Give the learners lots of opportunities to make stories of their own that lead to simple addition number sentences that bridge ten.

WEEK • WEEK 6

DAG 4 • DAY 4

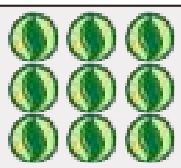
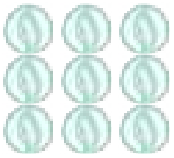
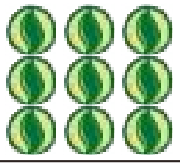
Optellingstories
Addition stories

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Vertel 'n optellingstorie oor die prent aan jou maat en skryf dan die getalsin neer.

Tell your partner an addition story about the picture and then write the number sentence.

Encourage learners to add by getting to the ten and bridge ten mentally using number bonds

	Getalsin Number sentence
 	9 + 6 = 15
 	7 + 4 = 11
 	8 + 7 = 15
 	3 + 9 = 12
 	5 + 8 = 13
 	6 + 7 = 13
 	9 + 9 = 18

Encourage learners to write stories in their exercise books

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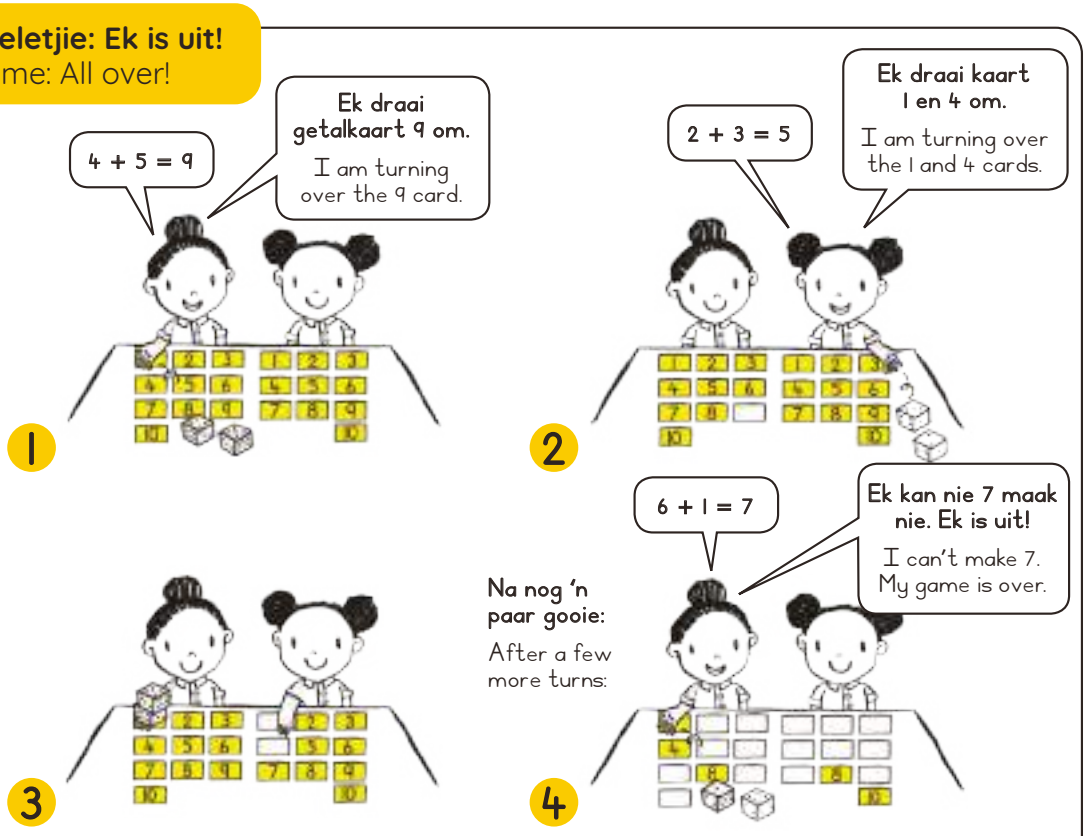
Addition stories

Speletjie: Ek is uit!
Game: All over!



Hou aan met die speletjie totdat jy 'n totaal gooi wat jy nie deur 'n kombinasie van die oorblywende kaarte kan maak nie. Dan is jy uit die spel.

Continue in this way until you throw a total that you can't make using a combination of the cards that remain. Then your game is over.



Tel jou kaarte. Die persoon met minder kaarte oor is die wenner.

Count your cards. The person with less cards left is the winner.

WEEK • WEEK 6

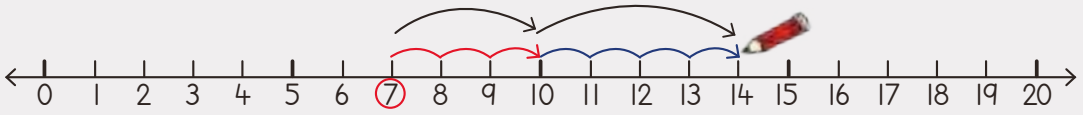
DAG 5 • DAY 5

Vaslegging
Consolidation

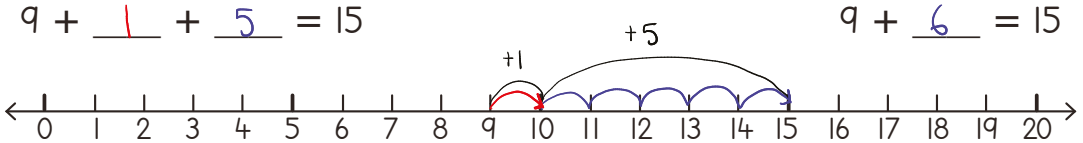
HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Kry die ontbrekende getalle met behulp van die getallelyne.
Use the number lines to find the missing numbers. First jump to 10 then jump the rest

7 + 3 + 4 = 14 | 7 + 7 = 14



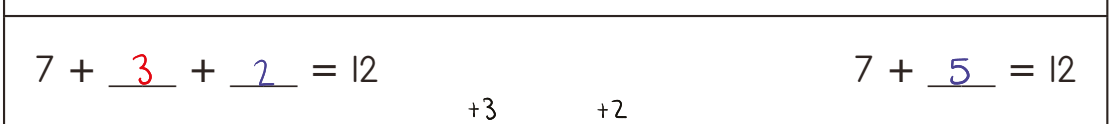
9 + 1 + 5 = 15 | 9 + 6 = 15



8 + 2 + 7 = 17 | 8 + 9 = 17



7 + 3 + 2 = 12 | 7 + 5 = 12



2 Tel die getal op die boks by.
Add to the number in the box.

Encourage adding on. Learners might add on by making a ten and adding the rest. This helps them start bridging ten mentally.

6 + ●●●●● = 11	7 + ●●●●● = 13
9 + ●●●●● = 16	8 + ●●●●● = 13

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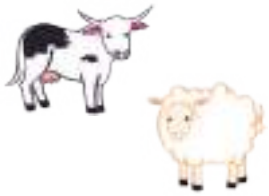
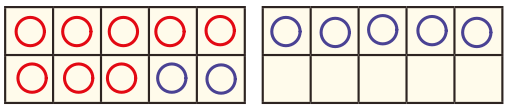
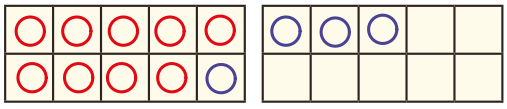
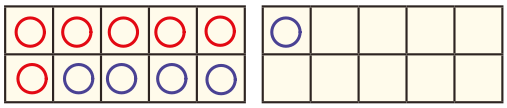
Assessment and consolidation

3 Los die probleme op en skryf die letters onderaan om die woorde te kry.
Solve the problems and write the letters below to find the words.

6 + 6 = 12	V	9 + 10 = 19	E
7 + 7 = 14	R	7 + 4 = 11	F
8 + 8 = 16	U	5 + 5 = 10	Y
9 + 9 = 18	B	4 + 5 = 9	R
10 + 10 = 20	L	3 + 5 = 8	K
6 + 7 = 13	E	8 + 9 = 17	B
7 + 8 = 15	D	1 + 6 = 7	S

7	8	9	10	11	12	13	14	15	16	17	18	19	20
S	K	R	Y	F	V	E	R	D	U	B	B	E	L

4 Hoeveel is daar altesaam? Los die probleme met behulp van die tienrame op.
How many altogether? Solve these problems using the ten frames.

8 koeie 8 cows 7 skape 7 sheep 	 8 + 7 = 15
9 katte 9 cats 4 varke 4 pigs 	 9 + 4 = 13
Daar is 6 perde op die plaas. Daar is 5 skape op die plaas. Hoeveel diere is daar op die plaas? There are 6 horses on the farm. There are 5 sheep on the farm. How many animals on the farm?	 6 + 5 = 11

Datahantering

	Hulpbronne
Hoofrekene: Maak 20 met kolkaarte	kolkaarte (onderwyser)
Speletjie: Geen speletjie nie	geen









Dag	Lesaktiwiteit	Leshulpbronne
1	Organiseer data	LB, multifix-blokkies, tellers
2	Organiseer en ontleed data	LB, multifix-blokkies, tellers, 2D vorms
3	Stel data voor en interpreteer dit	LB
4	Stel data voor en interpreteer dit	LB
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Sirkels te teken om groepe te maak	
Data te versamel en deur middel van sortering en tekeninge te organiseer	
Data op 'n piktogram voor te stel	
'n Gesorteerde versameling voorwerpe te ontleed en te interpreteer	

Formele assessering (verwys na die Assesseringsboek)

Skriftelike assessering: Datahantering

Data handling

	Resources
Mental Maths: Make 20 using dot cards	teacher dot cards
Game: No game	none









Day	Lesson activity	Lesson resources
1	Organising data	LB, multifix blocks, counters
2	Organising and analysing data	LB, multifix blocks, counters, 2-D shapes
3	Representing and interpreting data	LB
4	Representing and interpreting data	LB
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Draw circles to make groups	
Collect and organise data by sorting and drawing	
Represent data in a pictograph	
Analyse and interpret a sorted collection of objects	

Formal assessment (see the Assessment Booklet)

Written assessment: Data handling

Datahantering

Hoofrekene

Hierdie week in Hoofrekene maak ons 20. Bou voort op en lê ons kennis van die **getalkombinasies van 10** met behulp van kolkaarte vas. Die leerders moet 10 visualiseer deur die tienrame wat deur die gedrukte kolkaarte geskep word, 'vol te maak' en dan 20 maak. Hierdie aktiwiteite versterk die leerders se begrip van die getalkombinasies van tien en additiewe verwantskappe.



Speletjie

Geen speletjie nie

Konsepontwikkeling

Ons konsentreer hierdie week op datahantering. Die leerders leer om data te sorteer en te organiseer voordat hulle die data, wat op grafieke voorgestel word, interpreteer. Terwyl ons met datahantering werk, konsentreer ons daarop om:



- **data te versamel** en dit deur middel van tekeninge en sortering te **organiseer**. Maak seker dat die leerders 'n versameling voorwerpe het wat hulle kan sorteer sodat hulle kan sien dat daar verskillende maniere is waarop gesorteer kan word.
- data op 'n **piktogram** met behulp van **diagramme** en 'n sleutel voor te stel. Help die leerders om die sleutelkenmerke van grafieke te identifiseer en in te sien dat grafieke 'n eenvoudige manier is om inligting oor te dra.
- 'n gesorteerde versameling voorwerpe **te ontleed** en **te interpreteer**. Namate die leerders begin om data te ontleed en te interpreteer, moet geleenthede aan hulle gegee word om sin van 'n grafiek te maak deur te verstaan watter inligting die grafiek voorsien.

Waarna jy hierdie week moet oplet

- Help die leerders om in te sien dat grafieke vir kommunikasie gebruik word en dat hulle, deur na die lengte van die kolomme te kyk, vinnig die belangrike inligting kan raaksien.
- Die leerders moet ook weet dat, om 'n grafiek te interpreteer, meer verg as om bloot die aantal prente of blokkies te tel. Dit behels begrip van wat die data eintlik vir jou vertel.
- Moedig die leerders aan om met mekaar te gesels sodat hulle die korrekte woordeskat kan gebruik terwyl hulle datahantering bespreek (**sorteer**, **versamel**, **versameling**, **organiseer**, **beskryf**, **meer**, **minder**, **die meeste**, **die minste**, **meer algemeen**, **minder algemeen**, **telmerk**, **data** en **piktogram**).

Data handling

Mental Maths

In Mental Maths this week we make 20. We build on and consolidate knowledge of the **bonds of 10** using dot cards. Learners have to visualise 10 by 'filling' the ten frames created by the printed dot cards and then make 20. This activity strengthens learners' understanding of their bonds of ten and additive relations.



Game

No game

Concept development

This week we focus on data handling. Learners will learn to sort and organise data before interpreting data represented in graphs. In our work on data handling, we will focus on:



- **collecting** and **organising data** by drawing and sorting. Ensure that learners have a collection of items to sort so that they can see that there are different ways of sorting.
- represent data in a **pictograph** using **diagrams** and a **key**. Help learners to identify key feature of graphs and to recognise that graphs are a simple way of communicating information.
- **analyse** and **interpret** a sorted collection of objects. As learners begin to analyse and interpret data, give them opportunities to make sense of a graph by understanding what information the graph provides.

What to look out for this week

- Help learners to realise that graphs are used for communication and that by looking at the height of the columns they can quickly see important information.
- Learners also need to know that interpreting a graph requires more than simply counting the number of pictures/blocks. It involves understanding what the data is actually telling you.
- Encourage conversation between learners so that they can use the correct vocabulary as they discuss data handling (**sort**, **collect**, **collection**, **organise**, **describe**, **more**, **less**, **most**, **least**, **more common**, **least common**, **tally**, **data**, **pictograph**).

Organiseer data

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

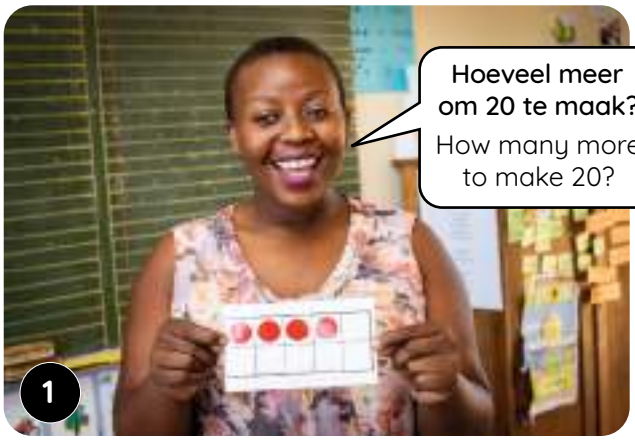
HOOFREKENE | MENTAL MATHS

Oefen om 20 met kolkaarte te maak.

Practise making 20 using dots cards.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.













Organising data

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT







Moedig 'n bespreking aan oor die verskillende maniere om items te sorteer. Herhaal die oefening met verskillende items soos potlode, knope of bottelproppies as dit beskikbaar is en, as daar nog tyd is, om die leerders aan baie ervaring in sortering bloot te stel en kans te gee om daaroor te gesels.

Encourage discussion on the different ways of sorting items. Repeat with different items such as pencils, buttons, or bottle tops if these are available and if there is time, to give learners lots of experience sorting items and talking about it.

WEEK 7 • WEEK 7

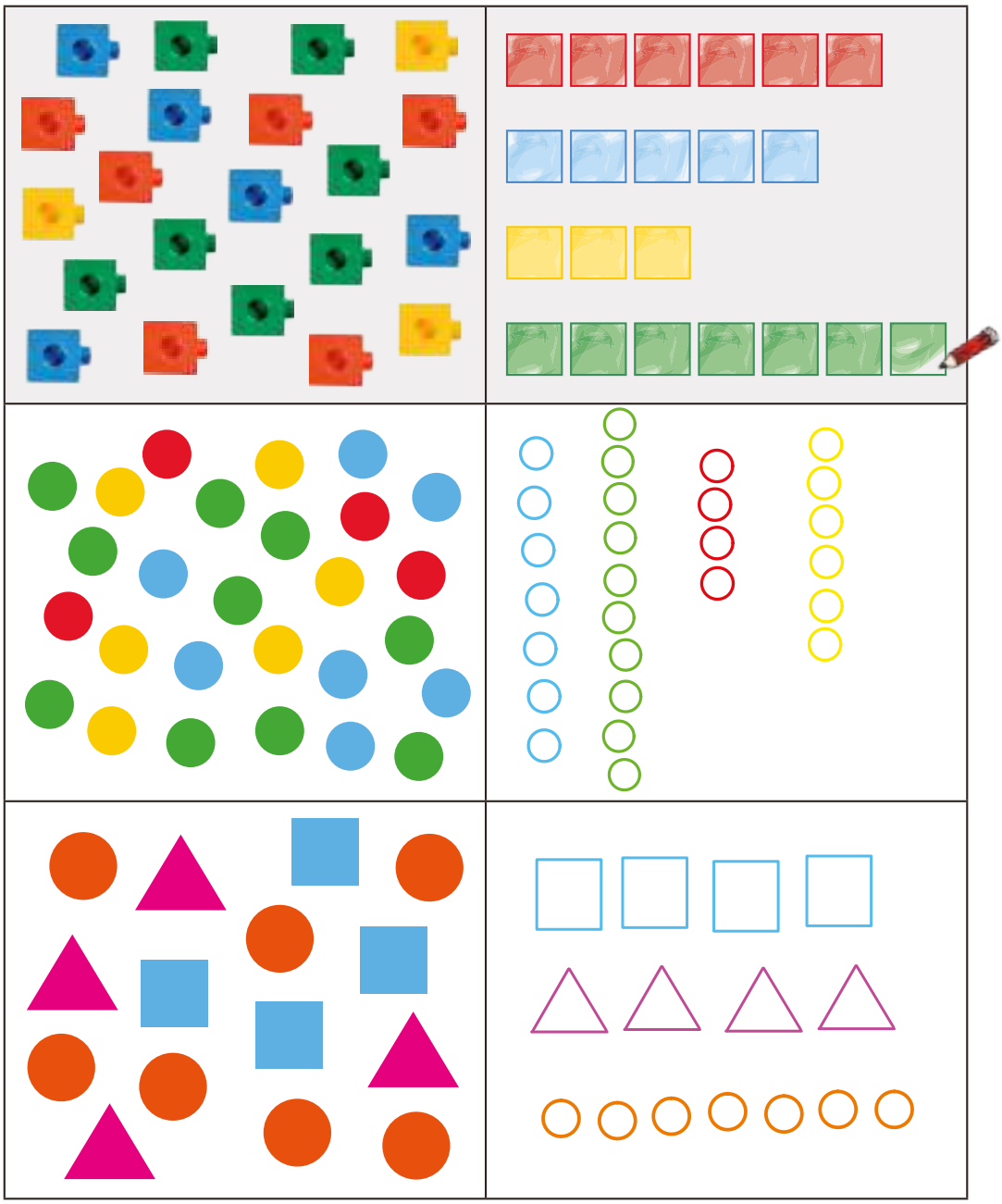
DAG 1 • DAY 1

Organiseer data
Organising data

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Sorteer die items en teken dit.

Sort the items and make a drawing.



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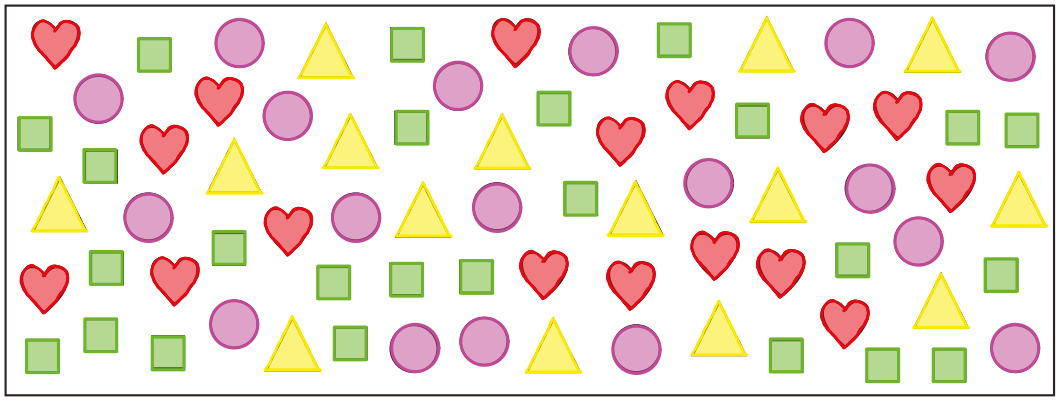
Organising data

Learners should use the colours that they have.
The colours used here are not necessarily the ones that they would use.

2 Kleur in en tel. Hoeveel is daar van elke vorm?

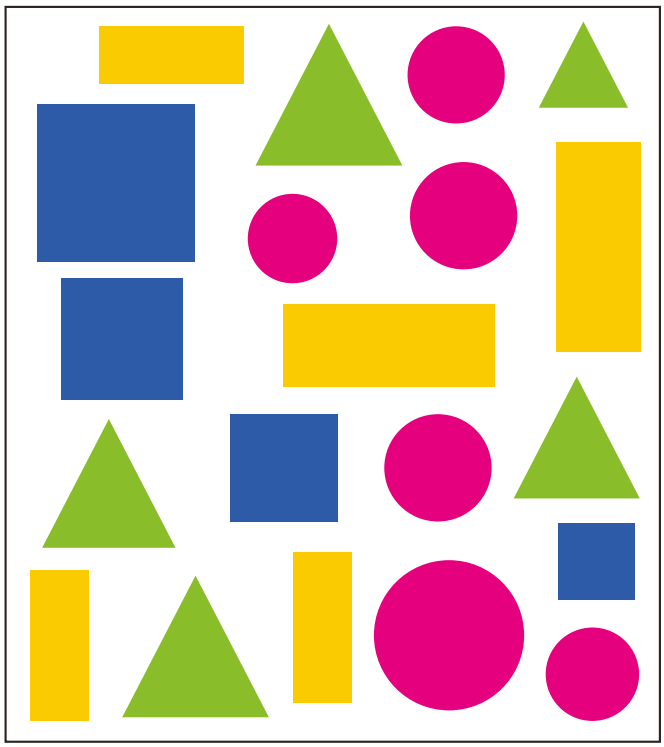
Colour and count. How many of each shape?



15	18	17	25

3 Kyk na die prent. Tel die vorms.

Look at the picture. Count the shapes.



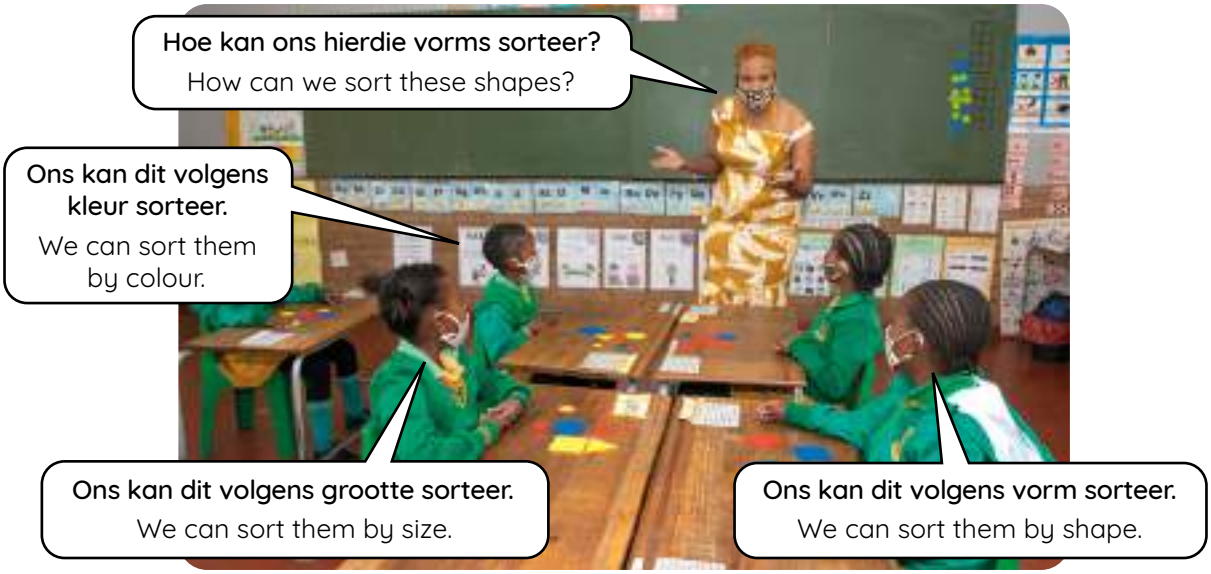
Hoeveel van elk? How many?	
	4
	5
	5
	6

Organiseer en ontleed data

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





Bespreek die sortering van vorms. Hersien die name van vorms, indien nodig. Skryf die aantal gesorteerde vorms van een groep leerders op die bord neer om dit te bespreek. Moedig die leerders aan om data te ontleed en te interpreteer deur hulle oor die vorm/kleur/grootte in terme van die meeste/die minste en meer as/minder as uit te vra.

Sit ander groepe voorwerpe neer om te sorteer en bespreek dit indien daar tyd daarvoor is. Teken die inligting op die bord aan om dit te bespreek.

Discuss the sorting of the shapes. Revise shape names if necessary. Write the number of sorted shapes from one group of learners on the board for discussion. Encourage learners to analyse and interpret data by asking about the shape/colour/size in terms of most/least and more than/less than.

Put out other groups of objects to sort and discuss if there is time. Record the information on the board for a discussion.

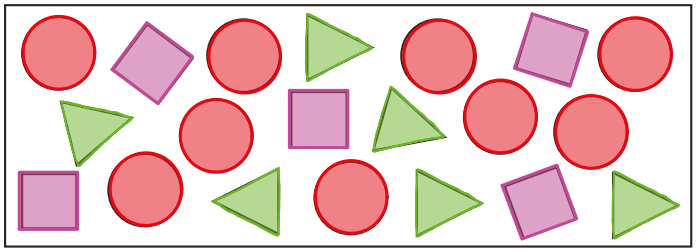
WEEK • WEEK 7

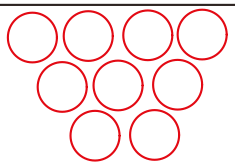
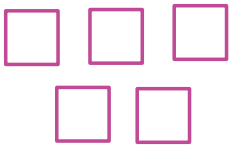
DAG 2 • DAY 2

Organiseer en ontleed data
Organising and analysing data

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

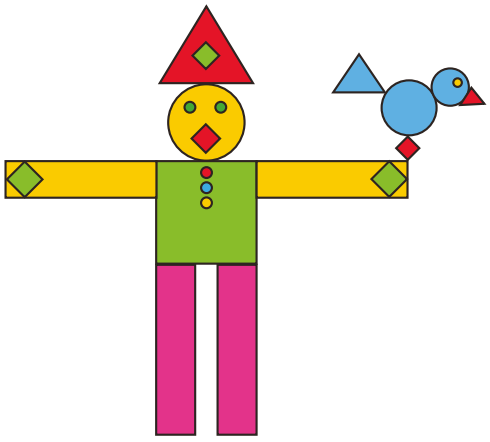
1 Sorteer die vorms en teken dit.
Sort the shapes and make a drawing.



driehoeke triangles	sirkels circles	vierkante squares
		

Hoeveel driehoeke is daar? How many triangles are there?	6
Hoeveel sirkels is daar? How many circles are there?	9
Hoeveel vierkante is daar? How many squares are there?	5

2 Kyk na die prent en beantwoord die vrae.
Look at the picture and answer the questions.

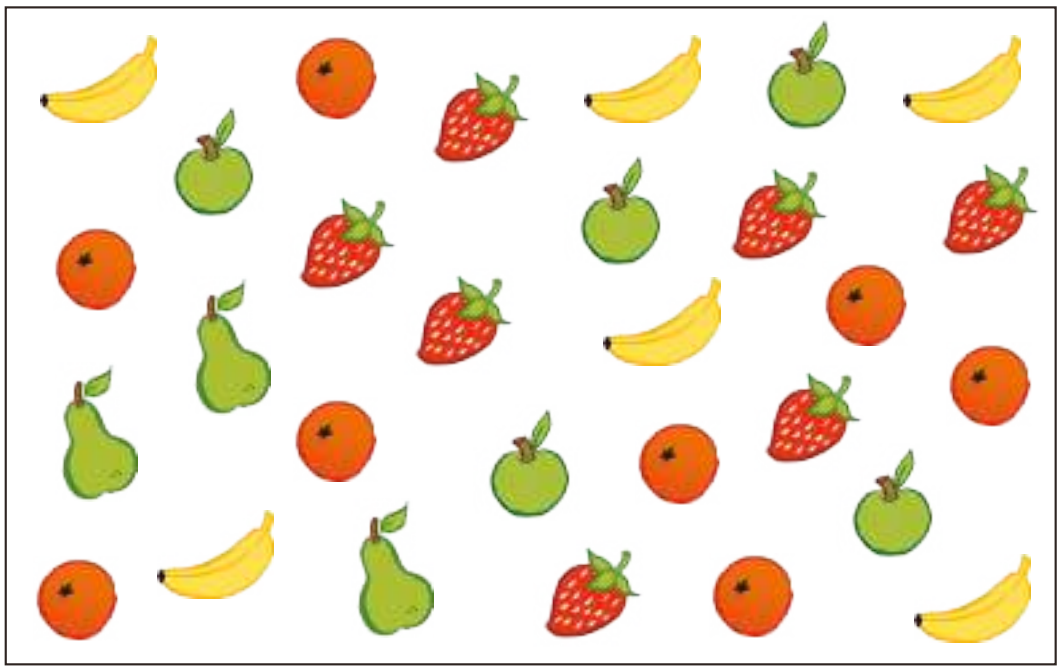


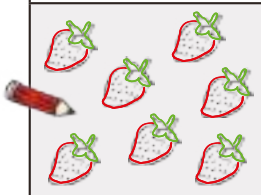
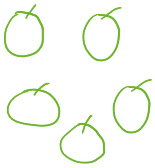
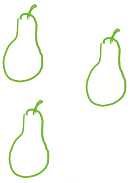
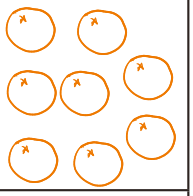
Hoeveel is daar? How many?	
vierkante squares	6
sirkels circles	9
driehoeke triangles	3
reghoeke rectangles	4

Organiseer en ontleed data

3 Sorteer die vrugte en beantwoord dan die vrae.

Sort the fruit and then answer the questions.



Ons gunstelingvrugte Our favourite fruit				
				
				
	5	6	3	8

Watter vrug is die gewildste? Which fruit is most popular?	
Watter vrug is die minste gewild? Which fruit is least popular?	

Representing and interpreting data

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Hoe kan ons uitvind hoeveel daar van elke vorm op die prent is?
How can we find out how many of each shape there are in the picture?





Stel data voor en interpreteer dit



Bespreek die kenmerke van die piktogram.
- **Die ruimtes waarin die vorms geteken moet word, is almal ewe groot.**
- **Die soort vorm word aan die onderkant van elke kolom gewys.**
- **'n Piktogram maak dit makliker om oor data te praat.**

Discuss the features of the pictograph.
- The spaces to draw the shapes into are all the same size.
- The type of shape is shown at the bottom of each column.
- A pictograph makes it easier to talk about data.

Moedig die leerders aan om data te ontleed en te interpreteer. Gee geleenthede vir die leerders om die gepaardgaande woordeskat te gebruik: meer as, minder as, die meeste en die minste.

Encourage learners to analyse and interpret data. Provide opportunities for learners to use the vocabulary: more than, less than, most and least.

Representing and interpreting data

WEEK • WEEK 7

DAG 3 • DAY 3

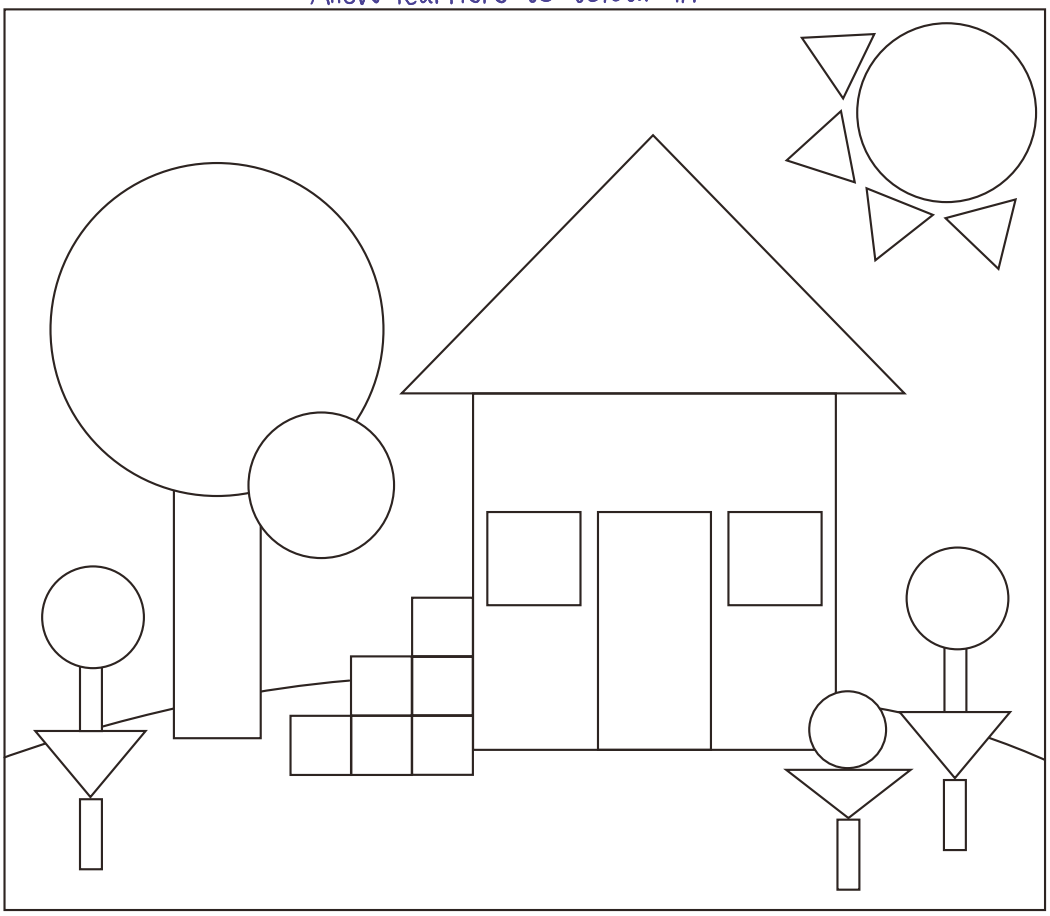
Stel data voor en interpreteer dit
Representing and interpreting data

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Kyk na die prent.

Look at the picture.

Allow learners to colour in



Tel hoeveel daar is.

Count how many.

6	9	7	8
sirkels circles	vierkante squares	reghoeke rectangles	driehoeke triangles

Stel data voor en interpreteer dit

2 Voltooi die piktogram vir die vorms in vraag 1.

Complete the pictograph for the shapes in question 1.

Aantal vorms Number of shapes				
10				
9		□		
8		□		△
7		□	▭	△
6	○	□	▭	△
5	○	□	▭	△
4	○	□	▭	△
3	○	□	▭	△
2	○	□	▭	△
1	○	□	▭	△
	○ sirkels circles	□ vierkante squares	▭ reghoeke rectangles	△ driehoeke triangles

3 Beantwoord die vrae.

Answer the questions.

Van watter vorm is daar die meeste? Which shape appears most often?	□
Van watter vorm is daar die minste? Which shape appears least often?	○
Van watter vorm is daar 2 meer as die ○? Which shape has 2 more than the ○?	△
Hoeveel ○ en △ is daar altesaam? How many ○ and △ are there altogether?	14

Representing and interpreting data

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

'n Piktogram is 'n maklike manier om data te sien wat versamel is.
A pictograph is an easy way to see data that has been collected.



Die opskrif sê ons dat hierdie piktogram oor gunsteling kleure gaan.
The heading tells us that this pictograph is about favourite colours.



Wat dink julle beteken die blokkies op hierdie piktogram?
What do you think the blocks in this pictograph mean?



Die sleutel sê ons dat een raampie een persoon voorstel.
The key tells us that one block represents one person.

Wat is die gunsteling kleur?
Which is the favourite colour?



Die meeste mense hou van wit.
Most people like white.

Vra ander vrae wat die leerders sover kry om die data te ontleed deur die blokkies te tel of deur na die lengte van die kolomme te kyk. Gee geleenthede dat die leerders die woordeskat kan gebruik: meer as, minder as, die meeste en die minste.

Ask other questions which get learners to analyse the data by counting the blocks or by looking at the height of the columns. Provide opportunities for learners to use the vocabulary: more than, less than, most and least.

Stel data voor en interpreteer dit

WEEK 7

DAG 4 • DAY 4

Stel data voor en interpreteer dit
Representing and interpreting data

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1

Januarie January						
So Sun	Ma Mon	Di Tues	Wo Wed	Do Thur	Vr Fri	Sa Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Tel die weertipes en skryf neer hoeveel daar is.
Count the weather types and write how many.

11	12	4	3	1
reënerig rainy	sonnig sunny	gedeeltelik bewolk partly cloudy	bewolk cloudy	winderig windy

Representing and interpreting data

2 Voltooi die piktogram vir die tipes weer in vraag 1.

Complete the pictograph for the weather types in question 1.

	reënerig rainy	sonnig sunny	gedeeltelik bewolk partly cloudy	bewolk cloudy	winderig windy
12		●			
11	●	●			
10	●	●			
9	●	●			
8	●	●			
7	●	●			
6	●	●			
5	●	●			
4	●	●	●		
3	●	●	●	●	
2	●	●	●	●	
1	●	●	●	●	●

Beantwoord die vrae.

Answer the questions.

Hoeveel sonnige dae was daar in Januarie? How many sunny days were there in January?	12
Hoeveel winderige dae was daar in Januarie? How many windy days were there in January?	1
Die meeste dae in Januarie was _____. Most days in January were sunny.	
Hoeveel meer sonnige dae as reënerige dae was daar in Januarie? How many more sunny days than rainy days were there in January?	1 more

WEEK 7 • WEEK 7

DAG 5 • DAY 5

Vaslegging
Consolidation

HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 By die lughawe
At the airport



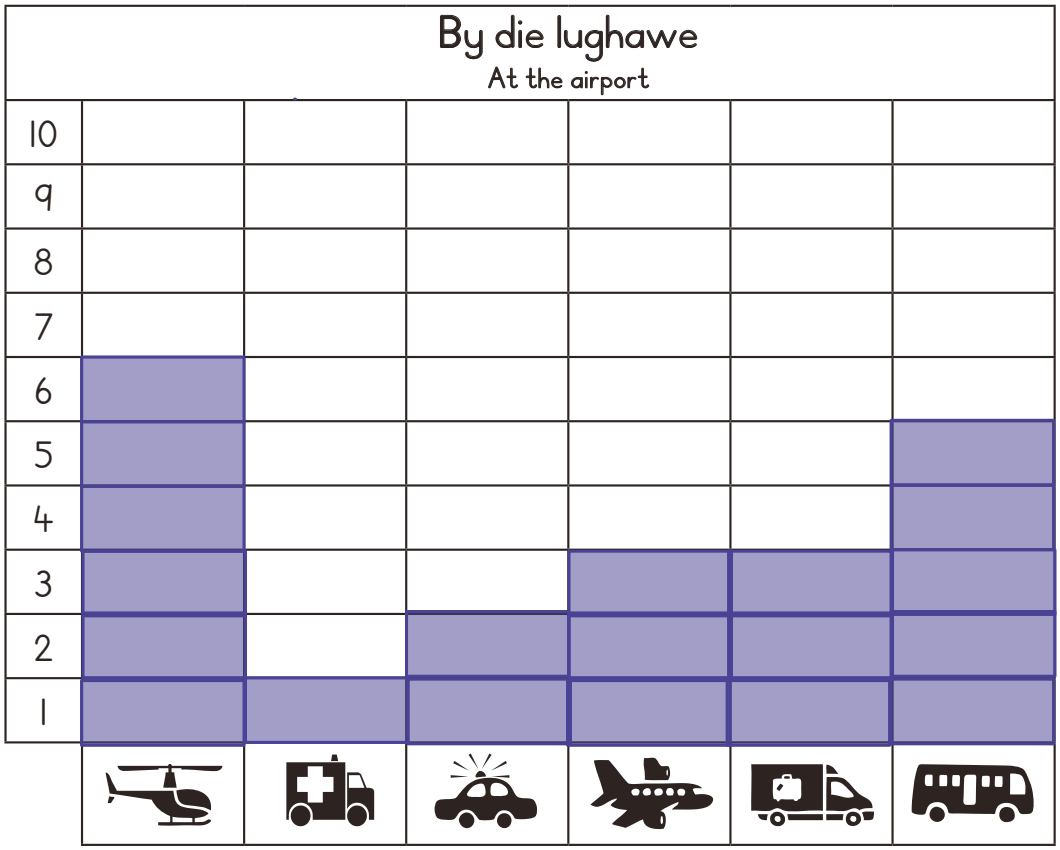
Kyk na die prent. Hoeveel is daar?
Look at the picture. How many?

	1	ambulanse ambulances
	2	polisiemotors police cars
	5	busse buses
	3	bagasietrokkies luggage trucks
	6	helikopters helicopters
	3	vliegtuie aeroplanes

71

Assessment and consolidation

2 Kleur die raampies met behulp van die data in.
Colour in the blocks using the data. Get learners to colour the blocks



3 Beantwoord die vrae.
Answer the questions.

Hoeveel motors kan jy sien?  How many cars can you see?	2
Van watter voertuie is daar die meeste? Which vehicles appear most often?	helicopter
Van watter voertuie is daar die minste? Which vehicles appear least often?	ambulance
Hoeveel  en  is daar altesaam? How many and altogether?	9
Hoeveel  en  is daar altesaam? How many and altogether?	8

Aftrekkingspatrone

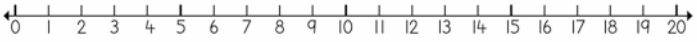
	Hulpbronne
Hoofrekene: Fizz Pop! – verdubbel	geen
Speletjie: Maak die druiwekorrels toe	tellers











Dag	Lesaktiwiteit	Leshulpbronne
1	Aftrekking met oorbrugging van 10	LB, getallelyn, getallebaan (onderwyser), twee tienrame, 20 tellers
2	Trek 9 af	LB, getallelyn (onderwyser), twee tienrame, 20 tellers
3	Trek 8 en 7 af	LB, getallelyn (onderwyser), twee tienrame, 20 tellers
4	Aftrekkingspatrone	LB, aftrekkingskaarte (onderwyser), twee tienrame, 2 dobbelstene en enkele tellers
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Verdubbel- en **halveerprobleme** met behulp van 'n getallelyn op te los	
Probleme rakende aftrekking (met oorbrugging van 10) op te los deur van tien af te trek	
Aftrekkingspatrone met behulp van aftrekkingskaarte te kry	

Formele assessering (verwys na die Assesseringsboek)

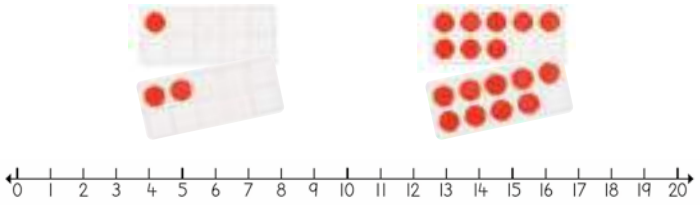
Skriftelike assessering: Getalle, Bewerkings en Verwantskappe – Aftrekking (met oorbrugging van tien) met behulp van tienrame, getallelyne en getalpatrone

WEEK 8

Subtraction patterns

	Resources
Mental Maths: Fizz Pop! – doubling	none
Game: Cover the grapes	counters





Day	Lesson activity	Lesson resources
1	Subtraction bridging 10	LB, number line, number track (teacher), two ten frames, 20 counters
2	Subtracting 9	LB, number line (teacher), two ten frames, 20 counters
3	Subtracting 8 and 7	LB, number line (teacher), two ten frames, 20 counters
4	Subtraction patterns	LB, subtraction cards (teacher), two ten frames, 2 dice and some counters
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Use a number line to solve **doubling** and **halving** problems	
Solve **subtraction** (**bridging 10**) **problems** by subtracting from ten	
Find **patterns of subtraction** using subtraction cards	

Formal assessment (see the Assessment Booklet)

Written assessment: Numbers, Operations and Relationships – Subtraction (bridging ten) using ten frames, number lines and number patterns

Aftrekkingspatrone

Hoofrekene

Ons keer na 'n gunstelingspeletjie, Fizz Pop!, terug – om **verdubbeling** te oefen. Verdubbeling is 'n belangrike vaardigheid wat deel uitmaak van die grondslagkennis wat vir **vermenigvuldiging** nodig is.



Speletjie

Maak die druiwekorrels toe



Konsepontwikkeling



Ons konsentreer hierdie week op aftrekking. Die leerders leer meer van die verwantskap tussen getallebane en getallelyne en hulle los ook **aftrekkingsprobleme** op wat 10 oorbrug. Terwyl ons met aftrekking werk, konsentreer ons daarop om:

- met behulp van getallelyne af te trek.
- probleme rakende **aftrekking met oorbrugging van 10** op te los deur af te trek om 'n 10 te maak. Die leerders begin besef dat dit 'n makliker en vinniger metode is om probleme op te los wanneer hulle 9, 8 en 7 moet aftrek.
- probleme met behulp van tellers en tienrame op te los, sodat 'n begrip van **plekwaarde** by die leerders kan begin ontwikkel.
- skakels tussen die oplossing van probleme met tienrame en tellers en die oplossing van probleme met getallelyne te vorm. Die leerders moet vroeg reeds begin om getallelyne te gebruik aangesien dit 'n belangrike voorstelling in wiskunde is.

Waarna jy hierdie week moet oplet

- Aftrekking deur 'n tien te maak wanneer probleme rakende aftrekking met oorbrugging van 10 opgelos word, word aanbeveel as 'n metode wat die leerders in die rigting stuur van hoofrekene in plaas van 'n getellery.
- Dit is belangrik dat die leerders moet verstaan hoe om **getalle af te breek** en **op te bou** deur met tienrame en tellers te werk. Dit help die leerders om later 'n begrip van **plekwaarde** te ontwikkel.
- Moedig gesprekke onder die leerders aan sodat hulle hul oplossingsmetodes onder mekaar kan uitruil. Maak seker dat die leerders die korrekte woordeskat: **'n tien**, **ene**, **trek af**, **neem weg**, **minus** gebruik.

Subtraction patterns

Mental Maths

We return to a favourite game – Fizz Pop! – to practise **doubling**. Doubling is an important skill which is part of the foundational knowledge needed for **multiplication**.



Game

Cover the grapes



Concept development

This week we focus on subtraction. Learners will learn more about the relationship between number tracks and number lines, and they will also solve **subtraction problems** that bridge 10. In our work on subtraction, we will focus on:



- using number lines to subtract.
- solving **subtraction bridging 10** problems by subtracting to make a 10. Learners will realise that this is an easier and quicker method to solve problems when subtracting 9, 8 or 7.
- solving problems by using counters and ten frames, which begins to develop an understanding of **place value**.
- creating links between solving problems with ten frames and counters and solving problems with number lines. Learners need to start using number lines early on as they are an important mathematical representation.

What to look out for this week

- Subtracting by making a ten when solving bridging 10 subtraction problems is recommended as a method that moves learners towards calculating mentally rather than counting.
- It is important for learners to understand how to **break down** and **build up numbers** by working with ten frames and counters. This will help learners to develop an understanding of **place value** later on.
- Encourage conversation between learners so that they can share their solution methods. Ensure that learners are using the correct vocabulary: **a ten**, **ones**, **subtract**, **take away**, **less**.

Aftrekking met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Lê verdubbeling met behulp van die Fizz Pop! speletjie vas.

Consolidate doubling using the Fizz Pop! game.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.













Subtraction bridging 10

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons dink aan aftrekking met behulp van 'n getallelyn. Kom ons wys 13 – 4 = ____ op die getallelyn.

Let's think about subtraction using a number line. Let's show 13 – 4 = ____ on the number line.



Ek spring 3 spronge terug vanaf 14 en ek land op 10. Dan spring ek nog een keer terug. Ek land op 9.

I take 3 steps back from 14 and I land on 10. Then I step back once more. I land on 9.



Kom ons bereken nou 13 – 4 met tienrame en tellers.

Now let's calculate 13 – 4 using ten frames and counters.



Ons sit 13 tellers by die tienrame in. Dan neem ons 4 weg.

We put 13 counters into the ten frames. Then we must take away 4.

As ek 3 van die tweede tienraam wegneem, bly daar 10 in die eerste tienraam oor. Dan neem ek nog 1 weg. Daar bly 9 oor.

If I take away 3 from the second ten frame, I am left with 10. Then I must take away 1 more. I am left with 9.



Werk deur talle voorbeelde saam met die klas – deur aftrekking met oorbrugging van tien met behulp van 'n getallelyn en tienrame te doen. Werk op jou getallelyn (of getallebaan) en met magnetiese tienrame op die bord, maar laat die leerders ook met hul eie tienrame werk.

Work though many examples together with the class – doing subtraction bridging ten using a number line and ten frames. Work on the board with your number line (or number track) and magnetic ten frames but also let the learners work with their own ten frames.

Aftrekking met oorbrugging van 10

WEEK • WEEK 8

DAG 1 • DAY 1

Aftrekking met oorbrugging van 10
Subtraction bridging 10

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING



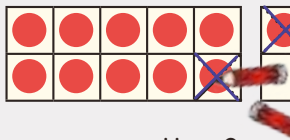
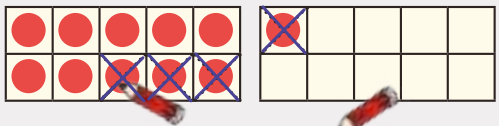
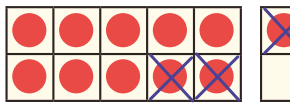
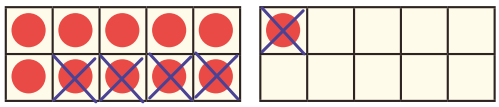
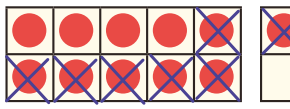
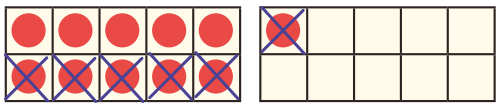
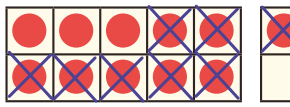
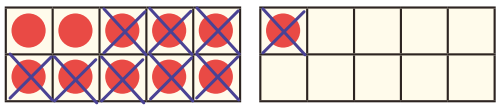
1 Trek af.
Subtract.

Draw learners' attention to the first step...
this takes them to the 'friendly' number 10

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

11 – 1 – 2 = 8	12 – 2 – 3 = 7
11 – 1 – 4 = 6	12 – 2 – 2 = 8
11 – 1 – 6 = 4	12 – 2 – 4 = 6
11 – 1 – 5 = 5	12 – 2 – 6 = 4
11 – 1 – 7 = 3	12 – 2 – 5 = 5

2 Trek af van 11.
Subtract from 11.

 11 – 2 = 9	 11 – 4 = 7
 11 – 3 = 8	 11 – 5 = 6
 11 – 7 = 4	 11 – 6 = 5
 11 – 8 = 3	 11 – 9 = 2

Subtraction bridging 10



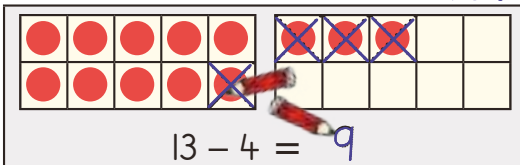
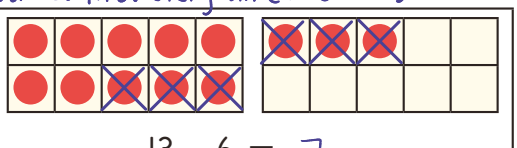
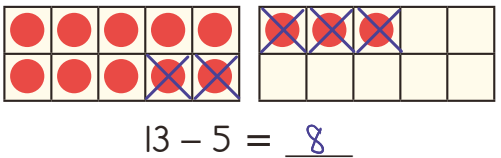
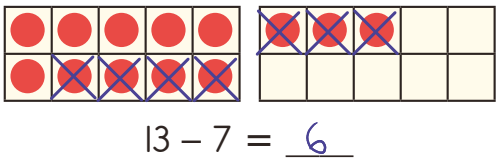
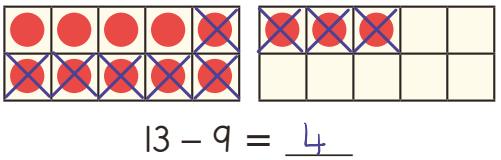
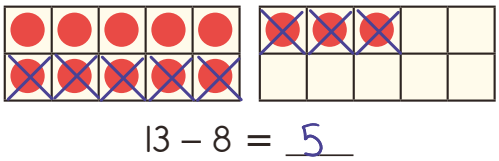
3 Trek af. Subtract. Highlight the use of the number track, especially for learners who may not have started using mental maths and number bonds to answer these questions



13 – 3 – 3 = 7	14 – 4 – 2 = 8	13 – 3 – 6 = 4
13 – 3 – 2 = 8	14 – 4 – 3 = 7	13 – 3 – 5 = 5
13 – 3 – 4 = 6	14 – 4 – 1 = 9	14 – 4 – 5 = 5

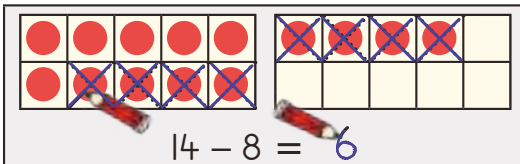
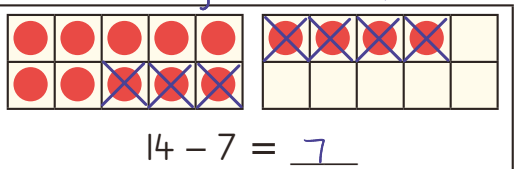
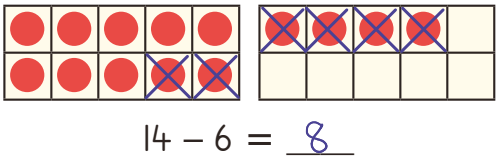
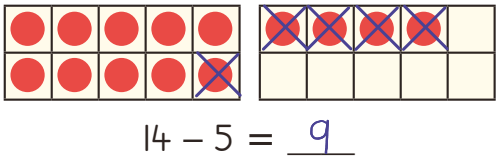
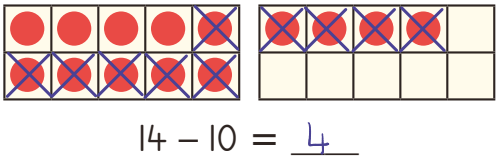
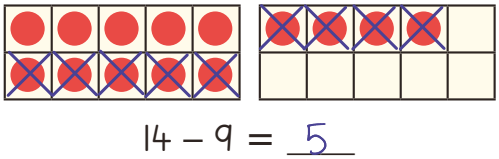
4 Trek af van 13.

Subtract from 13. Ask: what did we subtract first every time? (three)

 13 – 4 = 9	 13 – 6 = 7
 13 – 5 = 8	 13 – 7 = 6
 13 – 9 = 4	 13 – 8 = 5

5 Trek af van 14.

Subtract from 14. Ask: what did we subtract first every time? (four)

 14 – 8 = 6	 14 – 7 = 7
 14 – 6 = 8	 14 – 5 = 9
 14 – 10 = 4	 14 – 9 = 5

Trek 9 af

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





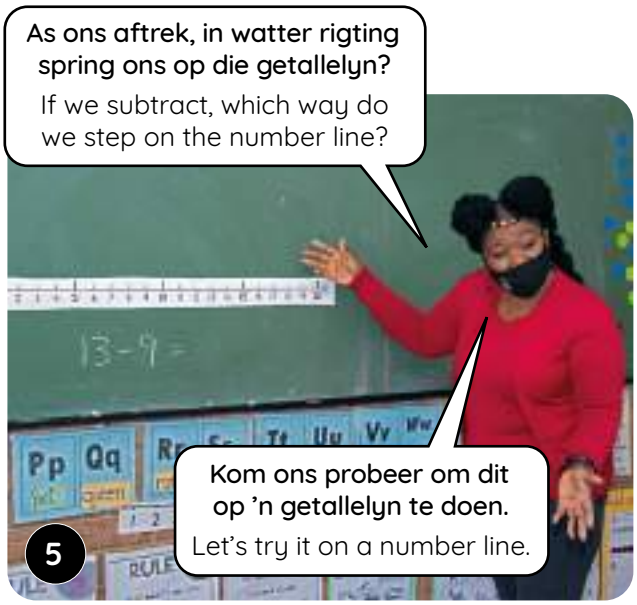


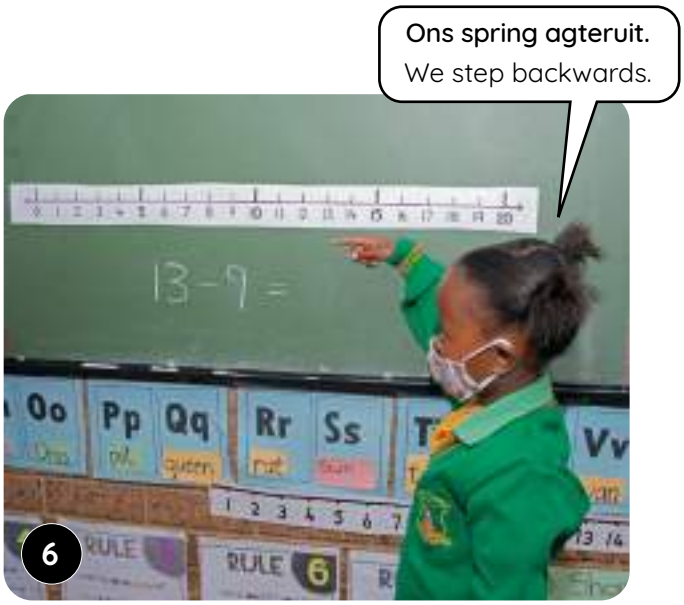


Gee meer probleme vir die leerders waarin hulle 9 met behulp van tienrame en tellers moet aftrek. Praat met hulle oor die patroon wat dit makliker maak om af te trek – neem 9 van die volgemaakte tienraam weg en tel 1 by die getal in die ander tienraam.

Give learners more problems where they must subtract 9 using ten frames and counters. Talk to them about the pattern that makes it easier to subtract – take away 9 from the full ten frame and add 1 to the number in the other ten frame.

Subtracting 9







Moedig die leerders aan om gedagtes uit te ruil aangesien dit hulle blootstel aan metodes wat meer doeltreffend as hul eie is. Dit is belangrik dat die leerders moet besef dat om van tien af te trek, vinniger en eenvoudiger is as om terug te tel. As ek 9 van enige getal aftrek, is dit soos om 10 af te trek en 1 by te tel.

Encourage learners to share ideas as this exposes them to methods that may be more efficient than their own. It is important for learners to realise that subtracting from the ten is quicker and simpler than counting backwards. If I subtract 9 from any number, it is like subtracting 10 and adding 1.

Trek 9 af

WEEK 8

DAG 2 • DAY 2

Trek 9 af
Subtracting 9

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

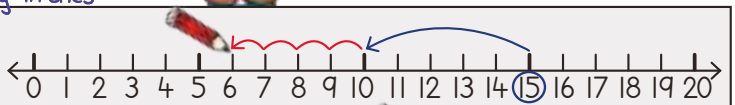
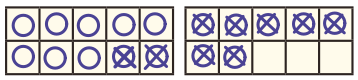
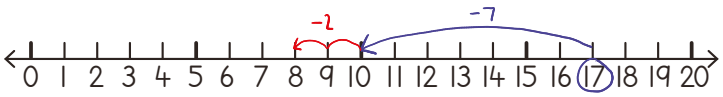
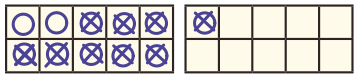
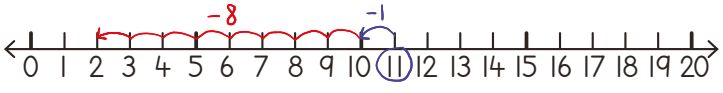
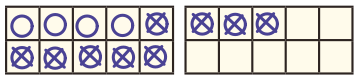
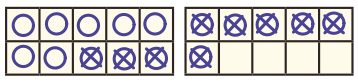
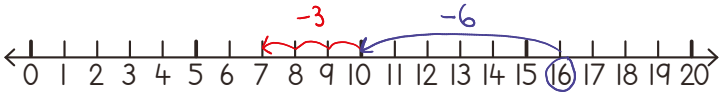
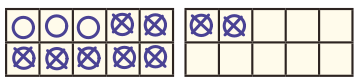
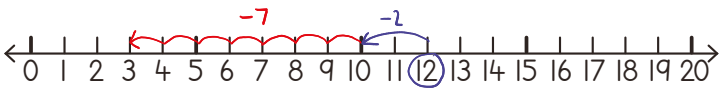
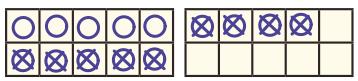
1 Trek af.

Subtract. Learners should bridge the ten when they subtract using number bonds rather than counting in ones



Wat merk jy op as jy 9 aftrek?
What do you notice when you subtract 9?

Subtracting 9 is like subtracting 10 and adding 1

 15 – 9 = 6	 15 – 9 = 6
 17 – 9 = 8	 17 – 9 = 8
 11 – 9 = 2	 11 – 9 = 2
 13 – 9 = 4	 13 – 9 = 4
 16 – 9 = 7	 16 – 9 = 7
 12 – 9 = 3	 12 – 9 = 3
 14 – 9 = 5	 14 – 9 = 5

Subtracting 9

The colours used here are optional, but learners must see there is a pattern in the way the numbers are coloured. Discuss this with them during the activity.

2 Los op en kleur die antwoord in.
Solve and colour the answer.

17 – 9 = 8	●	20 – 7 = 13	●
18 – 9 = 9	●	14 – 9 = 5	●
20 – 10 = 10	●	12 – 6 = 6	●
16 – 9 = 7	●	20 – 9 = 11	●
11 – 8 = 3	●	12 – 8 = 4	●
20 – 8 = 12	●	11 – 9 = 2	●

2 3 4 5 6 7 8 9 10 11 12 13

3 Trek af.
Subtract.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

13 – 5 = 8	15 – 7 = 8	14 – 8 = 6
14 – 7 = 7	14 – 6 = 8	13 – 6 = 7
14 – 5 = 9	13 – 4 = 9	13 – 8 = 5
15 – 6 = 9	15 – 8 = 7	15 – 9 = 6
13 – 7 = 6	13 – 9 = 4	14 – 9 = 5

4 Vul die ontbrekende getalle in om hierdie probleme op te los.
Fill in the missing numbers to solve these problems.

12 – 9 = 3	15 – 6 = 9	16 – 9 = 7
14 – 5 = 9	11 – 9 = 2	18 – 9 = 9
17 – 9 = 8	13 – 4 = 9	12 – 3 = 9

Trek 8 en 7 af

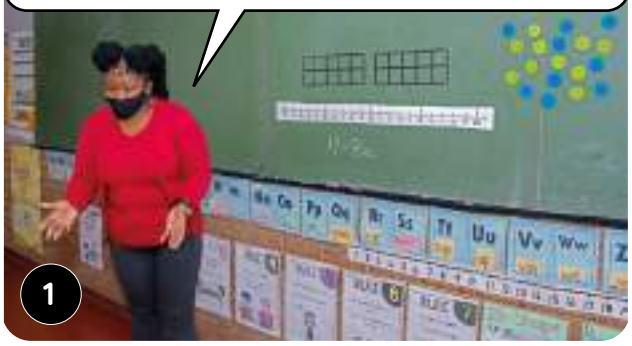
HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEEMOPLOSSING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Ons het gister 9 met behulp van getallelyne en tienrame afgetrek. Vandag gaan ons 8 en 7 aftrek. Kom ons begin deur 8 af te trek.

Yesterday we used number lines and ten frames to subtract 9. Today we are going to subtract 8 and 7. Let's start with subtracting 8.

11 – 8 = ____



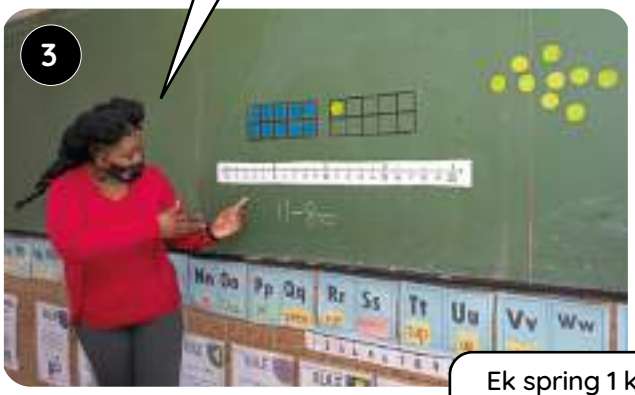
Ons het 11 tellers. As ek 8 van die volle 10 wegneem, bly daar 2 en 1 oor. Daar bly dus 3 tellers oor.

We have 11 counters. If I take away 8 from the full 10, I am left with 2 and 1. I am left with 3 counters.



Hoe kan julle die probleem 11 – 8 op die getallelyn oplos?

How can you solve the problem 11 – 8 on the number line?





Ek spring 1 keer van 11 tot by 10 en nog 7 keer by 3.

I take 1 step from 11 to 10 and 7 more steps to 3.

Herhaal albei metodes saam met die klas deur ander probleme te gebruik om 8 en 7 af te trek, soos:

Repeat both methods together with the class using other subtracting 8 and subtracting 7 problems, such as:

- **14 – 8 = ____**
- **15 – 8 = ____**
- **12 – 7 = ____**
- **16 – 7 = ____**

Moedig die leerders aan om op te let dat, wanneer ons 8 aftrek, ons 10 kan wegneem en dan 2 bytel om by die antwoord uit te kom. As ons 7 aftrek, kan ons 10 getal wegneem en dan 3 bytel.

Encourage learners to notice that when we subtract 8, we can take away 10 and then add 2 to find the answer. When we subtract 7, we can take away 10 and then add 3 to find the answer.

Subtracting 8 and 7

WEEK • WEEK 8

DAG 3 • DAY 3

Trek 8 en 7 af
Subtracting 8 and 7

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Trek af.

Subtract.

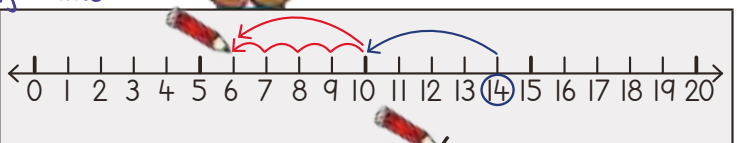
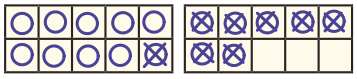
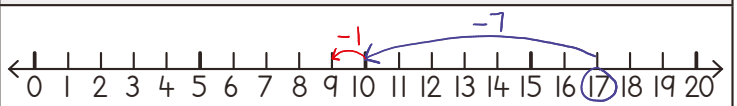
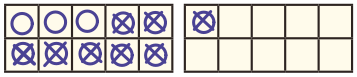
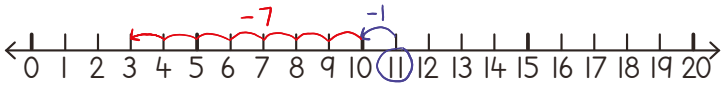
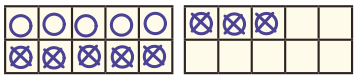
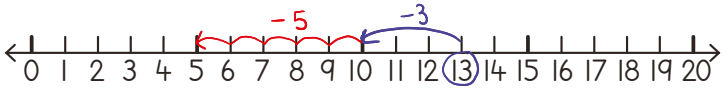
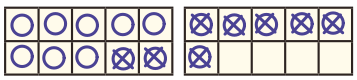
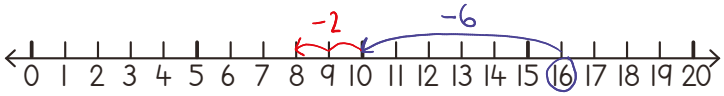
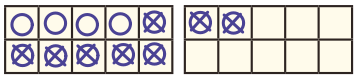
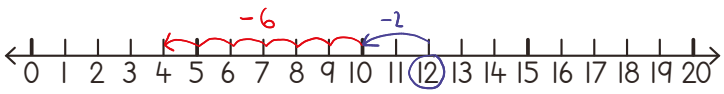
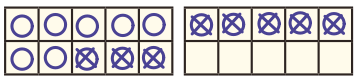
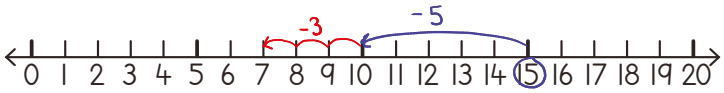
Learners should bridge the ten when they subtract using number bonds rather than counting in ones



Wat merk jy op as jy 8 aftrek?

What do you notice when you subtract 8?

Subtracting 8 is like subtracting 10 and adding 2

 14 – 8 = 6	 14 – 8 = 6
 17 – 8 = 9	 17 – 8 = 9
 11 – 8 = 3	 11 – 8 = 3
 13 – 8 = 5	 13 – 8 = 5
 16 – 8 = 8	 16 – 8 = 8
 12 – 8 = 4	 12 – 8 = 4
 15 – 8 = 7	 15 – 8 = 7

Trek 8 en 7 af

Learners should bridge the ten when they subtract using number bonds rather than counting in ones

2 Trek af.

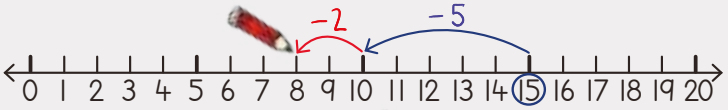
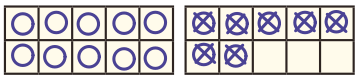
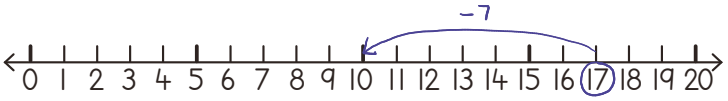
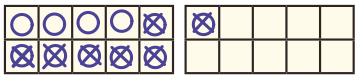
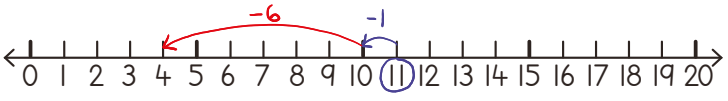
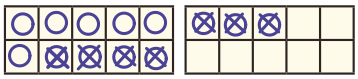
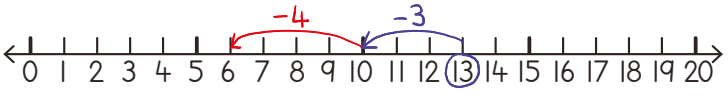
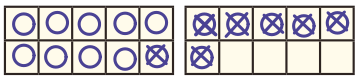
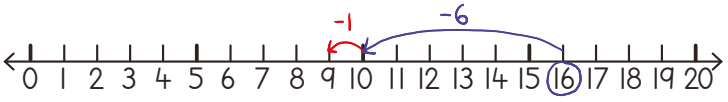
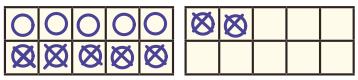
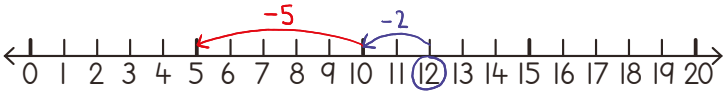
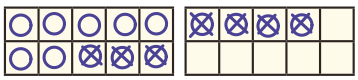
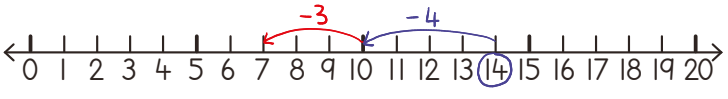
Subtract.



Wat merk jy op as jy 7 aftrek?

What do you notice when you subtract 7?

Subtracting 9 is like subtracting 10 and adding 1

 15 – 7 = 8	 15 – 7 = 8
 17 – 7 = 10	 17 – 7 = 10
 11 – 7 = 4	 11 – 7 = 4
 13 – 7 = 6	 13 – 7 = 6
 16 – 7 = 9	 16 – 7 = 9
 12 – 7 = 5	 12 – 7 = 5
 14 – 7 = 7	 14 – 7 = 7

Subtraction patterns

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kan julle al die getalsinne kry wat 7 as antwoord het?
Can you find me all the number sentences that have the answer 7?



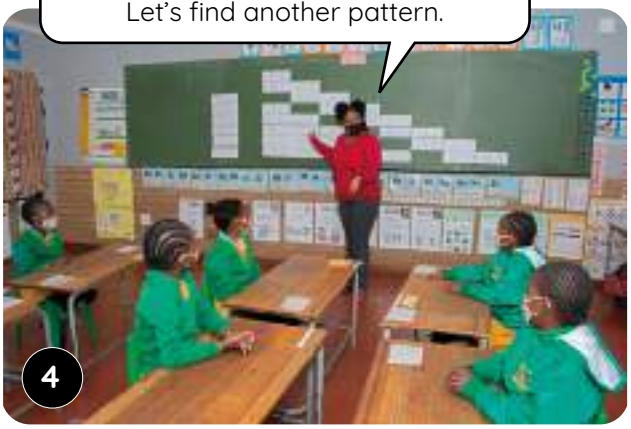
Watter patroon sien julle in die tabel raak nadat julle die kaarte wat 7 as antwoord het, uitgehaal het?
What pattern do you see in the table after taking out the cards that have the answer 7?



Wat merk julle op?
What do you notice?



Kom ons soek na nog 'n patroon.
Let's find another pattern.



Die getalle links van die minusteken bly dieselfde namate jy met die kaarte afbeweeg. Die getalle regs van die minusteken word groter met 1 namate jy met die kaarte afbeweeg.
The numbers on the left of the subtraction sign stay the same as you go down the cards. The numbers on the right of the subtraction sign get bigger by 1 as you go down the cards.

Gaan op hierdie manier deur elkeen van die aftrekkingskaarte sodat die leerders die patrone in die aftrekkingsgetalsinne kan raaksien. Gee baie geleenthede aan die leerders om die patrone wat hulle raaksien, te verduidelik. Dit gee hulle kans om hul redeneringsvaardighede in wiskunde uit te bou.

Go through each of the subtraction cards in this way so that learners can see the patterns in the subtraction number sentences. Allow the learners many opportunities to explain the patterns they see. This will give them the chance to develop their mathematical reasoning skills.

Aftrekkingspatrone

WEEK 8 • WEEK

DAG 4 • DAY 4

Aftrekkingspatrone
Subtraction patterns

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Los op en kleur in om die patroon te kry.
Solve and colour to find the pattern.

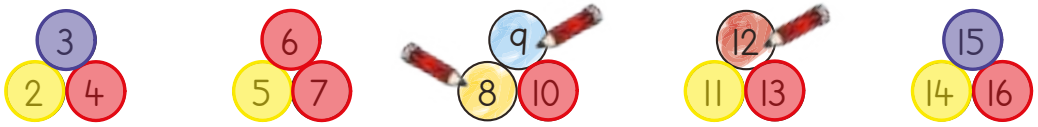
'Near doubles' are also easy number facts:

9 + 9 = 18	5 + 5 = 10
4 + 4 = 8	4 + 5 = 9 — This is like double 5 minus 1
7 + 7 = 14	5 + 6 = 11 — double 5 plus 1
6 + 6 = 12	8 + 8 = 16
9 + 8 = 17	3 + 4 = 7 — double 3 plus 1
8 + 7 = 15	7 + 6 = 13 — double 7 minus 1 OR double 6 plus 1



2 Los op en kleur in om die patroon te kry.
Solve and colour to find the pattern.

11 – 3 = 8	13 – 4 = 9	9 + 3 = 12
11 – 6 = 5	11 – 9 = 2	8 + 5 = 13
11 – 8 = 3	14 – 7 = 7	7 + 9 = 16
12 – 6 = 6	15 – 5 = 10	7 + 8 = 15
12 – 8 = 4	20 – 9 = 11	6 + 8 = 14

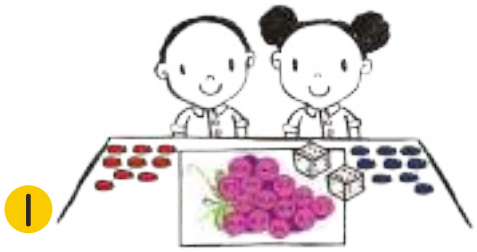


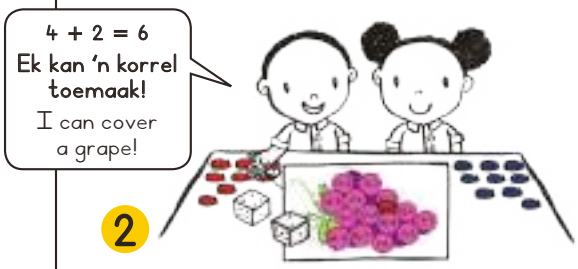
Subtraction patterns

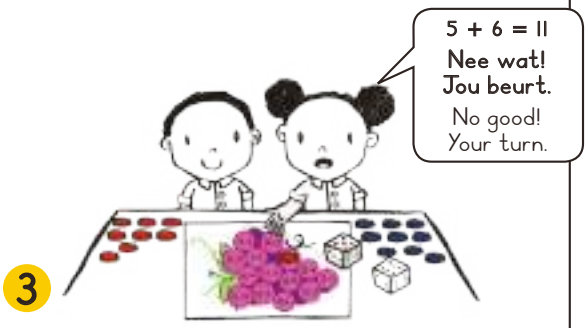
Speletjie: Maak die druiwekorrels toe
Game: Cover the grapes

Gebruik die spelbord op bladsy 105. Gooi die dobbelstene en tel op. Kry die druiwekorrel met jou antwoord daarop. Jy kan daardie korrel toemaak.

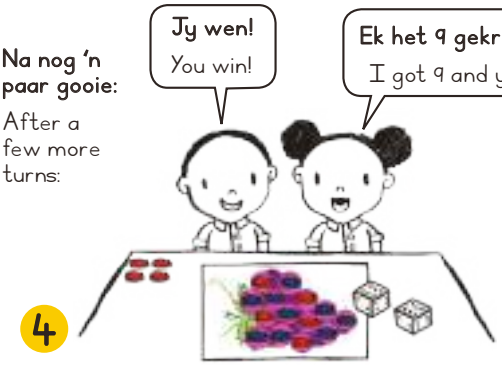
Use the game board on page 105. Roll the dice and add. Find a grape with your answer. You can cover that grape.





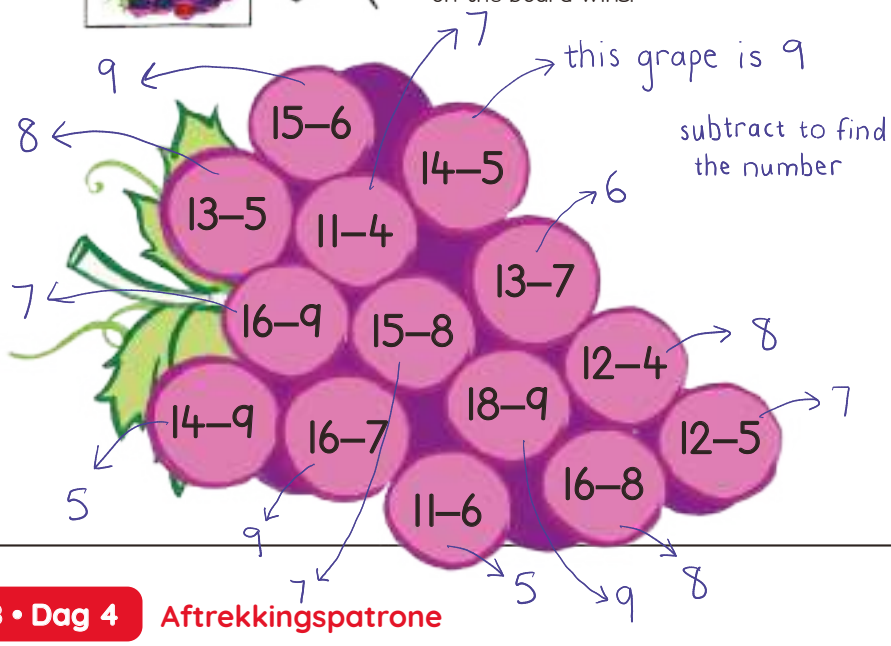


Na nog 'n paar gooie:
After a few more turns:



Die leerder wat die meeste korrels op die bord toemaak, is die wenner.

The person who covers the most grapes on the board wins.



WEEK 8 • WEEK

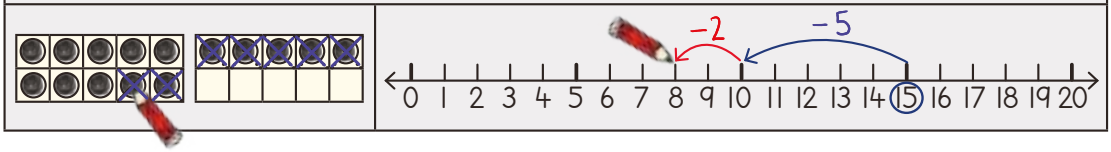
DAG 5 • DAY 5

Vaslegging
Consolidation

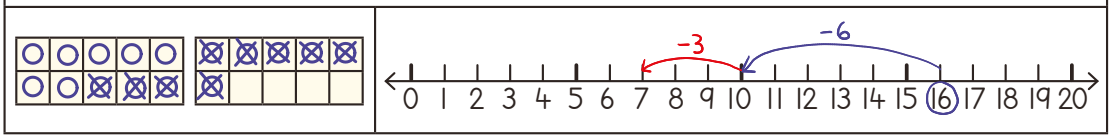
HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Trek af met behulp van die tienraam en die getallelyn.
Subtract using the ten frame and number line.

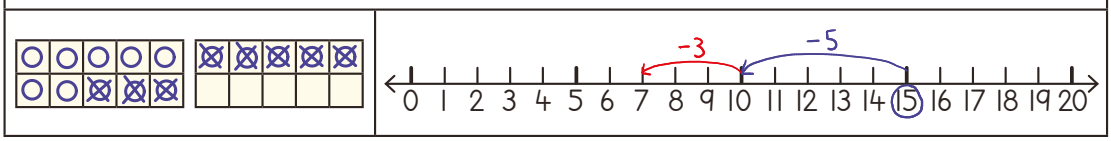
15 – 7 = 8



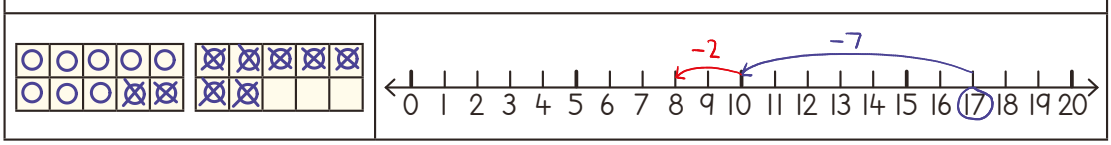
16 – 9 = 7



15 – 8 = 7



17 – 9 = 8



2 Vul die ontbrekende getalle in om hierdie probleme op te los.
Fill in the missing numbers to solve these problems.

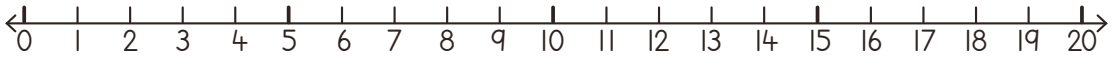
14 – 7 = 7	11 – 7 = 4	15 – 8 = 7
12 – 5 = 7	18 – 11 = 7	16 – 7 = 9
13 – 7 = 6	17 – 10 = 7	20 – 7 = 13

Assessment and consolidation

3 Gebruik enige metode om af te trek.
Subtract using any method.

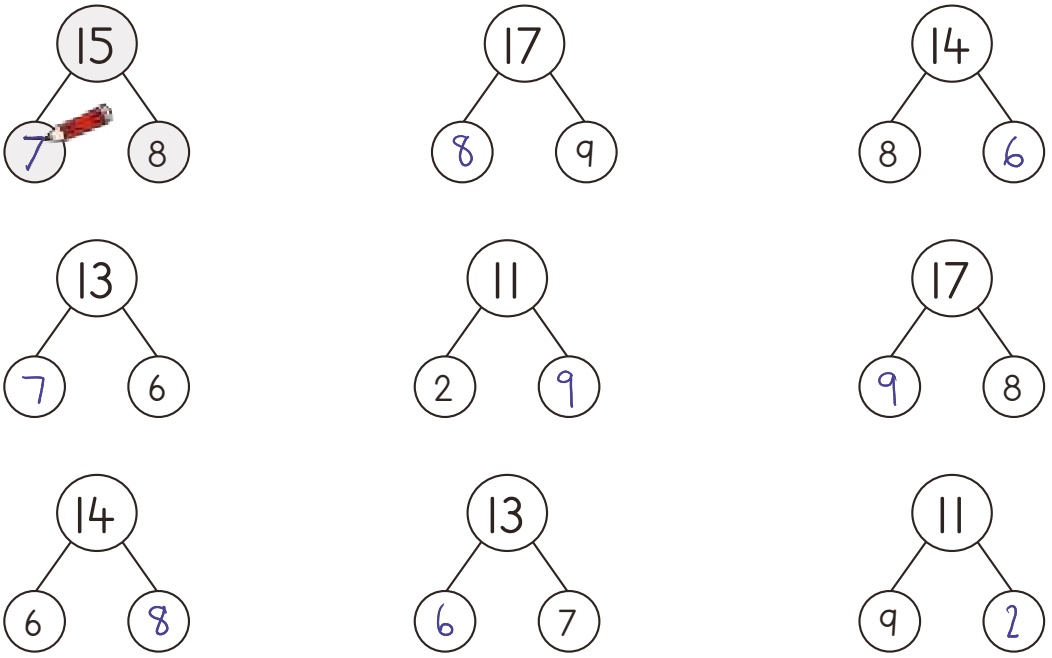






18 – 9 = 9	11 – 7 = 4	13 – 8 = 5
14 – 6 = 8	15 – 9 = 6	12 – 7 = 5
17 – 8 = 9	13 – 6 = 7	11 – 9 = 2

4 Vul die oop sirkels in.
Fill the empty circles.

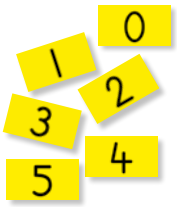


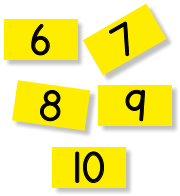
Aftrekking met oorbrugging van 10

	Hulpbronne
Hoofrekene: Salueer-speletjie	getalkaarte 0 tot 5
Speletjie: Kry my getal!	getalkaarte 0 tot 10 (leerders)












Dag	Lesaktiwiteit	Leshulpbronne
1	Aftrekking met oorbrugging van 10	LB, twee tienrame, 20 tellers
2	Aftrekking met oorbrugging van 10	LB, twee tienrame, 20 tellers
3	Kry die ontbrekende getal	LB, twee tienrame, 20 tellers
4	Aftrekking met oorbrugging van 10	LB, twee tienrame, 20 tellers, dobbelstene
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Probleme rakende aftrekking wat 10 oorbrug, op te los deur van die tien af te trek	
Die ontbrekende getal in 'n getalsin te kry	

Formele assessering

Daar is hierdie week geen formele assessering nie.

Neem die leerders in die klas daagliks waar en maak notas as deel van jou deurlopende informele assessering vir leer.

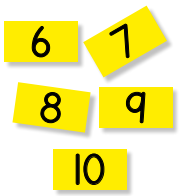
Subtraction bridging 10

	Resources
Mental Maths: Salute game	number cards 0–5
Game: Make my number!	learner number cards 0–10












Day	Lesson activity	Lesson resources
1	Subtraction bridging 10	LB, two ten frames, 20 counters
2	Subtraction bridging 10	LB, two ten frames, 20 counters
3	Find the missing number	LB, two ten frames, 20 counters
4	Subtraction bridging 10	LB, two ten frames, 20 counters, dice
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Solve **subtraction** problems that bridge 10 by subtracting from the 10	
Find the missing number in a **number sentence**	

Formal assessment

There is no formal assessment this week.

You should observe the learners in your class daily and make notes as part of your informal ongoing assessment for learning.

Aftrekking met oorbrugging van 10

Hoofrekene

Ons gaan hierdie week die Salueer-speletjie van Kwartaal 2 speel. Hierdie speletjie gee die leerders kans om hul optellingsvaardighede te oefen – daar moet twee getalle gekry word wat saam 'n gegewe totaal gee. Dis 'n slim speletjie aangesien die leerders nie net die ontbrekende getal moet kry nie, maar ook die som moet uitwerk.



Speletjie

Kry my getal!



Konsepontwikkeling

Ons konsentreer hierdie week op aftrekking met oorbrugging van 10. Die leerders versterk hul kennis van die oplossing van probleme rakende aftrekking wat tien oorbrug. Terwyl ons met aftrekking werk, konsentreer ons daarop om:



- probleme rakende **aftrekking met oorbrugging van 10** op te los deur van 'n tien af te trek. Die leerders begin besef dat dit vinniger en makliker is om probleme op te los deur van die tien af te trek.
- probleme met behulp van tellers en tienrame op te los, waardeur begin word om 'n begrip van **plekwaarde** te ontwikkel en die skakels tussen die oplossing van probleme met tienrame en tellers vas te lê.
- probleme op te los ten einde die vermoë vas te lê om die ontbrekende getal in 'n getalsin te kry.
- die leerders toe te laat om hul oplossingsmetodes te bespreek sodat hulle gedagtes kan uitruil en hul eie begrip sodoende verder kan uitbou.

Waarna jy hierdie week moet oplet

- Help die leerders om in te sien dat aftrekking van 'n tien 'n meer doeltreffende manier is om aftrekkingsprobleme op te los as om terug te tel. Moedig hulle aan om hoofrekene te doen.
- Moedig gesprekke onder die leerders aan sodat hulle hul oplossingsmetodes onder mekaar uitruil. Maak seker dat die leerders die korrekte woordeskat: **'n tien**, **ene**, **trek af**, **neem weg**, **minus** gebruik.

Subtraction bridging 10

Mental Maths

This week we will be playing the game from Term 2 called Salute. The game gives learners a chance to practise their addition skills – finding two numbers that add up to a given total. It is a powerful game because learners have to find the missing number, not just the sum.



Game

Make my number!



Concept development

This week we focus on **subtraction bridging 10**. Learners will reinforce what they have learnt about solving subtraction problems that bridge ten. In our work on subtraction, we will focus on:



- solving subtraction bridging 10 problems by subtracting from ten. Learners will realise that it is quicker and easier to solve problems by subtracting from the ten.
- solving problems by using counters and ten frames, which begins to develop an understanding of **place value** and consolidates the links between solving problems with ten frames and counters.
- solving problems to consolidate the ability to find the missing number in a number sentence.
- allowing learners to discuss their solution methods so that they can share ideas and further develop their own understanding.

What to look out for this week

- Help learners to recognise that subtracting from a ten is a more efficient way of solving subtraction problems than counting backwards. Encourage them to do mental calculations.
- Encourage conversation between learners so that they can share their solution methods. Ensure that learners are using the correct vocabulary: **a ten**, **ones**, **subtract**, **take away**, **less**.

Aftrekking met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

HOOFREKENE | MENTAL MATHS

Speel die Salueer-speletjie. Gebruik net die getalkaarte van 0 tot 5.

Play the Salute! game. Use only 0–5 number cards.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.













Subtraction bridging 10

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Hoe dink julle kan julle hierdie probleem oplos?
How do you think you could solve this problem?



Ons moet 8 van 14 aftrek.
We need to subtract 8 from 14.

Onthou julle dat ons geleer het dat deur van 'n tien af te trek, dit ons help om vinniger en makliker af te trek?
Remember we learnt that subtracting from a ten helped us to subtract more quickly and easily?



Hoe gebruik ons dus ons tienrame om hierdie probleem op te los?
So how do we use our ten frames to solve this problem?

Ons sit die grootste getal (14) soos volg op die tienrame in.
We put the biggest number (14) on the ten frames like this.



Ons moet 8 uit die volgemaakte tienraam wegneem (aftrek).
We need to subtract 8 from the full ten frame.



Daar bly 2 tellers in hierdie tienraam oor en 4 tellers in daardie tienraam oor.
There are 2 counters left on this ten frame, and 4 counters left on that ten frame.



Daar bly altesaam 6 tellers oor.
There are 6 counters left over.

Moedig die leerders aan om oor hul oplossingsmetodes te gesels. Party leerders kan verkies om die tweede tienraam leeg te maak en die res van die volle tien af te trek. Dit werk ook goed en moet aangemoedig word. Herhaal met ander probleme rakende aftrekking met oorbrugging van 10, soos:

Encourage learners to talk about their solution methods. Some learners might prefer to empty the second ten frame and subtract the rest from the full ten. This also works well and should be encouraged. Repeat with other subtraction bridging 10 problems, such as:

- **12 – 3 = ____**
- **11 – 4 = ____**
- **14 – 5 = ___**

Aftrekking met oorbrugging van 10

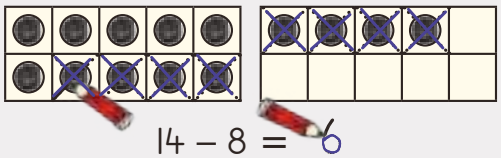
WEEK 9

DAG 1 • DAY 1

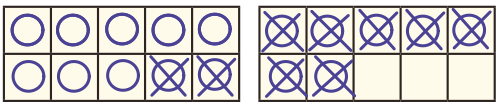
Aftrekking met oorbrugging van 10
Subtraction bridging 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

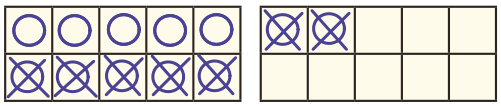
1 Trek af.
Subtract.



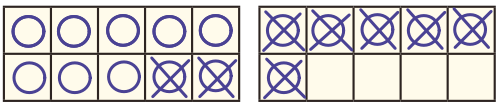
14 – 8 = 6



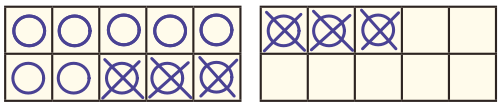
17 – 9 = 8



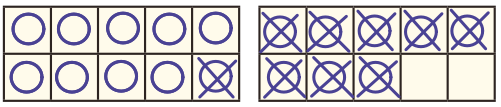
12 – 7 = 5



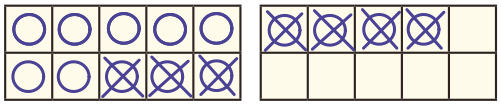
16 – 8 = 8



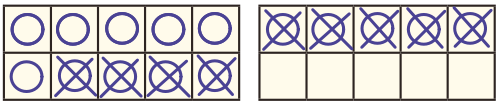
13 – 6 = 7



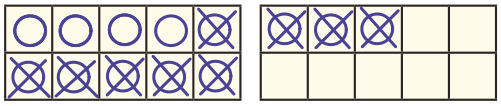
18 – 9 = 9



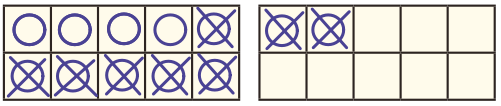
14 – 7 = 7



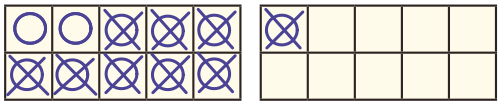
15 – 9 = 6



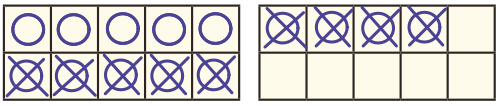
13 – 9 = 4



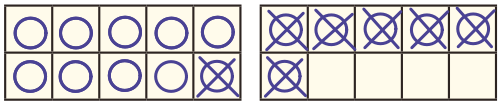
12 – 8 = 4



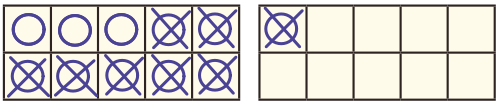
11 – 9 = 2



14 – 9 = 5



16 – 7 = 9

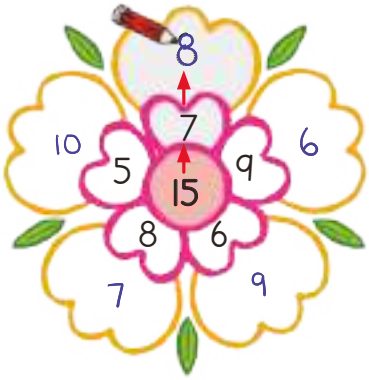


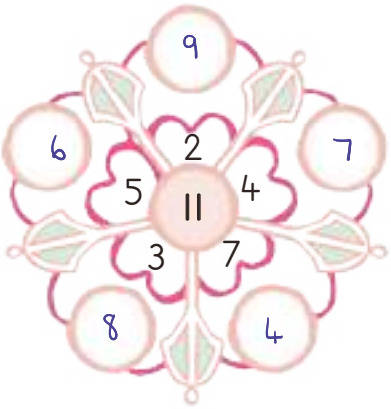
11 – 8 = 3

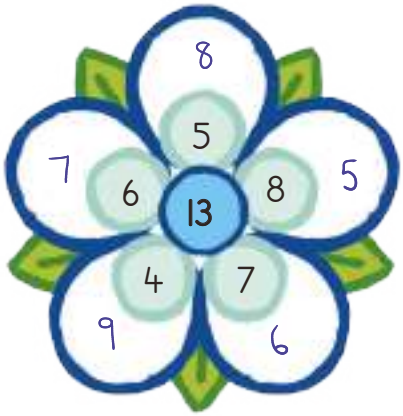
Subtraction bridging 10

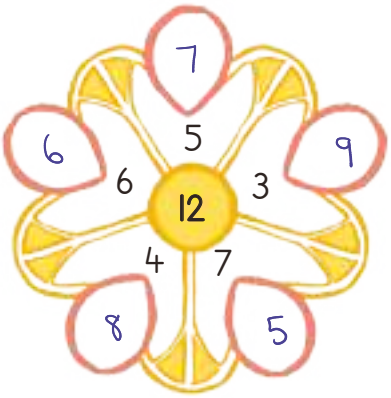
2 Trek af.
Subtract.

Get learners to answer orally first



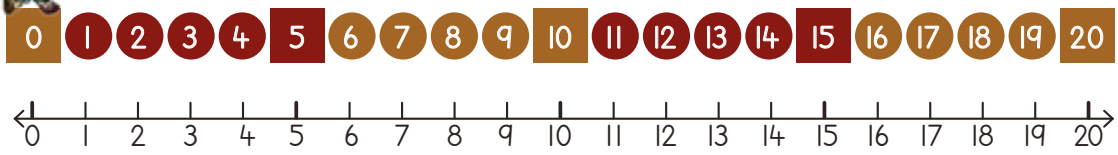








3 Trek af.
Subtract.



18 – 7 = 11	12 – 8 = 4	17 – 9 = 8
16 – 9 = 7	13 – 6 = 7	15 – 6 = 9
15 – 8 = 7	18 – 9 = 9	13 – 7 = 6
14 – 6 = 8	14 – 7 = 7	11 – 8 = 3

Aftrekking met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT





Sit tyd opsy dat die leerders kan bespreek wie die probleem die gouste opgelos het en dat hulle kan dink oor wie se berekeningsmetode die vinnigste was. Help hulle om in te sien dat die gebruik van die tienrame hulle help om die getalle raak te sien (in plaas daarvan om die tellers een vir een te tel) en dit dus vinniger as 'n getellery is.

Allow time for learners to discuss who solved the problem quickest and to think about which calculation method was faster. Encourage them to notice that using the ten frames to help them see the numbers (rather than counting single counters) is quicker than counting.

Gaan op dieselfde manier as hier bo voort deur die leerders geleentheid te gee om elke keer hul metodes te vergelyk. Moedig hulle aan om te gesels oor dit wat hulle gehelp het om die berekeninge vinniger te doen (deur nie te tel nie). Werk deur etlike voorbeelde saam met die klas terwyl hulle hul metodes bespreek.

Continue in the same way as above, allowing learners to compare their methods each time. Encourage learners to talk about what helped them to do the calculations more quickly (not counting). Work through several examples with the class while they discuss their methods.

• **13 – 5 = ____** • **15 – 9 = ____** • **12 – 4 = ____** • **14 – 8 = ____** • **17 – 9 = ____** • **16 – 8 = ____**

Subtraction bridging 10

WEEK • WEEK 9

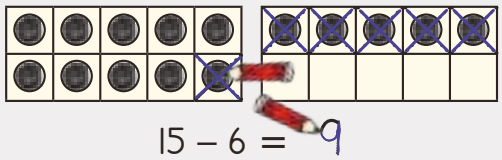
DAG 2 • DAY 2

Aftrekking met oorbrugging van 10
Subtraction bridging 10

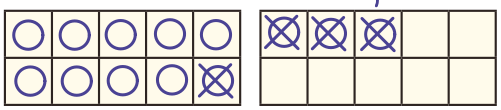
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Trek af.
Subtract.

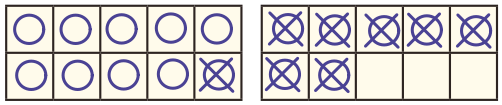
the missing number is how much you've taken away



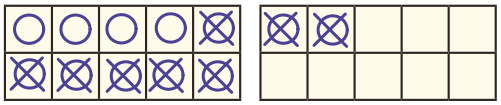
15 – 6 = 9



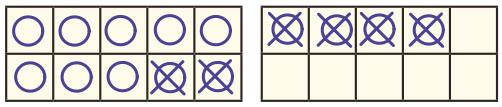
13 – 4 = 9



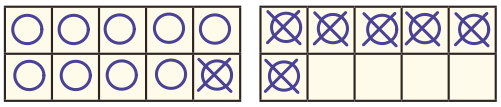
17 – 8 = 9



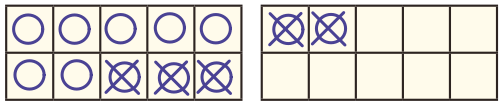
12 – 8 = 4



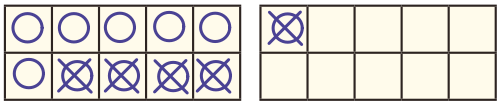
14 – 6 = 8



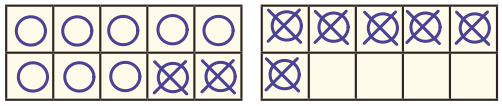
16 – 7 = 9



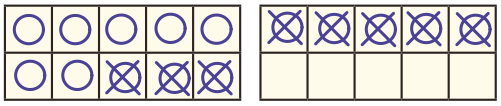
12 – 5 = 7



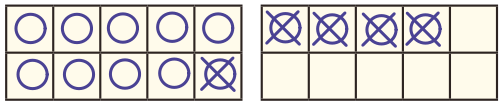
11 – 5 = 6



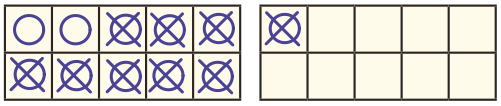
16 – 8 = 8



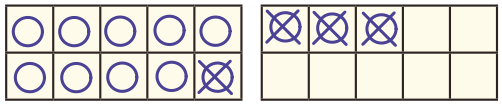
15 – 8 = 7



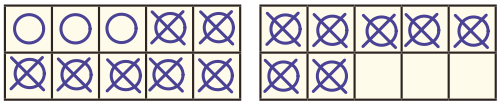
14 – 5 = 9



11 – 9 = 2



13 – 4 = 9



17 – 14 = 3

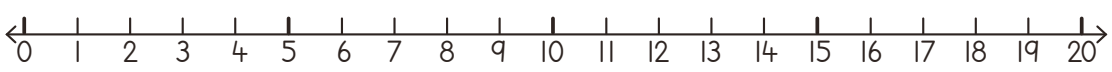
Aftrekking met oorbrugging van 10



2 Trek af.

Subtract.

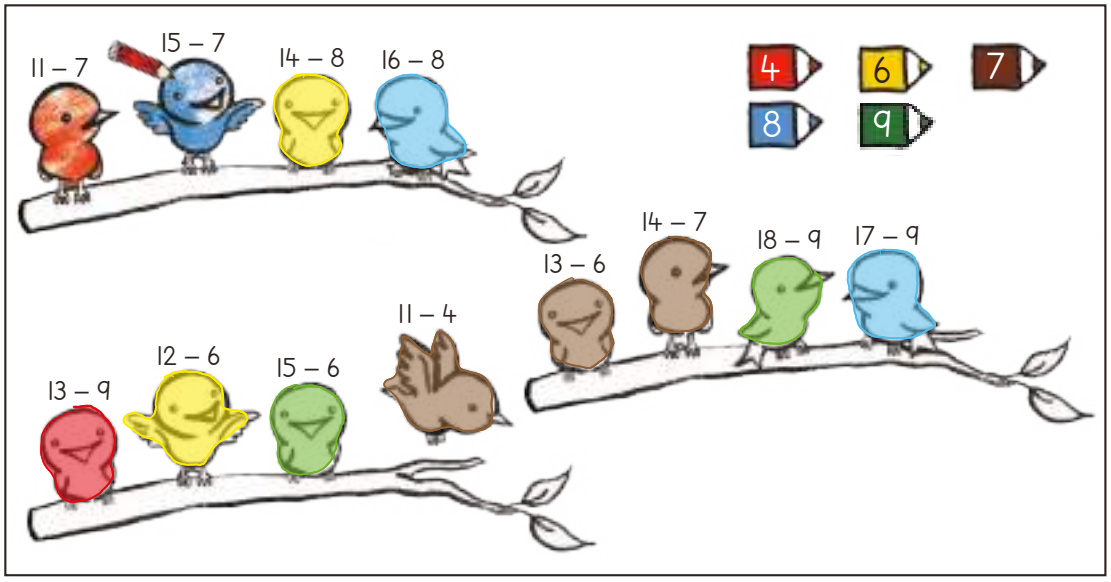




11 – 9 = 2	11 – 5 = 6
14 – 8 = 6	12 – 8 = 4
12 – 6 = 6	15 – 9 = 6
15 – 7 = 8	14 – 7 = 7
13 – 8 = 5	13 – 6 = 7
15 – 8 = 7	14 – 9 = 5

3 Trek af en kleur in.

Subtract and colour.



Find the missing number

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Kom ons werk saam om die ontbrekende getal op die blom te kry deur al die getalle aan die buitekant op te tel. Die getal aan die binnekant is die totaal.

Let's work together to find the missing number on the flower by adding all the numbers on the outside. The inside number is the total.



1

Ek het 'n totaal van 16 nodig. Die getalle op die blomblare gee 'n totaal van 1. Die ontbrekende getal is 15.

I need a total of 16. The total in the petals is 1. The missing number is 15.


2

Kom ons doen nog een!

Let's do another one!


3

Ek het 'n totaal van 13 nodig. Die getalle op die blomblare gee 'n totaal van 6. Die ontbrekende getal is 7.

I need a total of 13. The total in the petals is 6. The missing number is 7.

Kom ons doen nog een!

Let's do another one!


4

Ek het 'n totaal van 19 nodig. Die getalle op die blomblare gee 'n totaal van 10. Die ontbrekende getal is 9.

I need a total of 19. The total in the petals is 10. The missing number is 9.

Teken nog blomme met verskillende ontbrekende getalle op die blomblare om te oefen om die ontbrekende getal te kry.

Draw some more flowers with different missing number petals to practise finding the missing number.

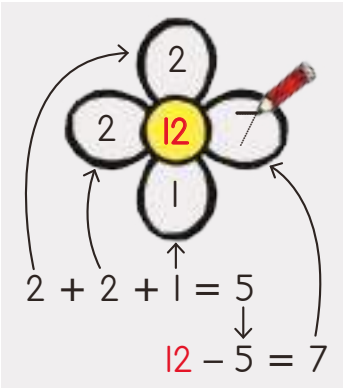
WEEK 9 • WEEK

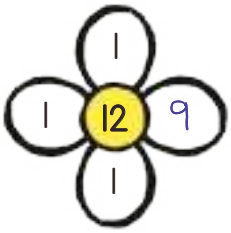
DAG 3 • DAY 3

Kry die ontbrekende getal
Find the missing number

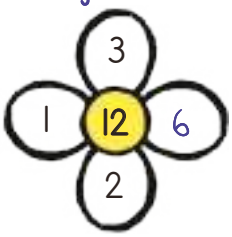
HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Kry die ontbrekende getal.
Find the missing number. First add numbers on the petals
Then subtract this total from the number in the yellow centre

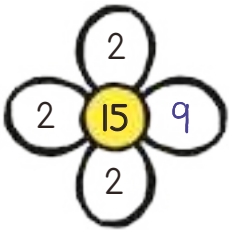




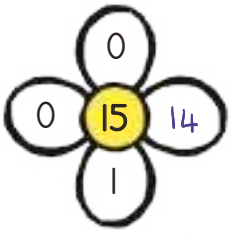
1 + 1 + 1 = 3
12 – 3 = 9



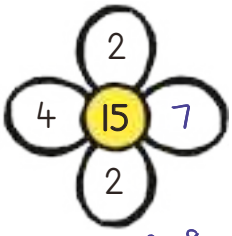
3 + 1 + 2 = 6
12 – 6 = 6



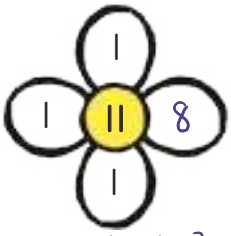
2 + 2 + 2 = 6
15 – 6 = 9



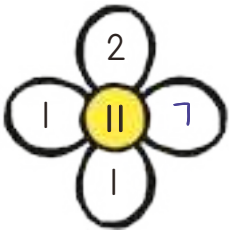
0 + 0 + 1 = 1
15 – 1 = 14



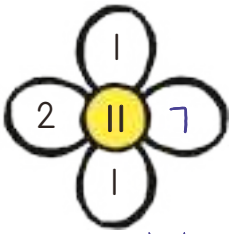
2 + 4 + 2 = 8
15 – 8 = 7



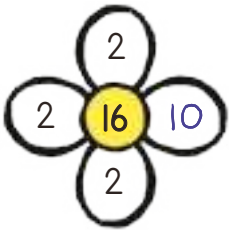
1 + 1 + 1 = 3
11 – 3 = 8



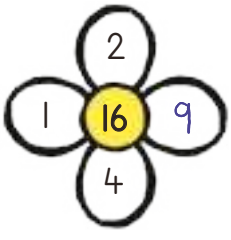
2 + 1 + 1 = 4
11 – 4 = 7



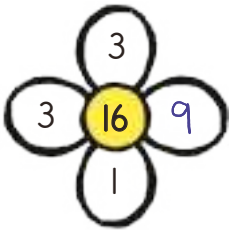
1 + 2 + 1 = 4
11 – 4 = 7



2 + 2 + 2 = 6
16 – 6 = 10



2 + 1 + 4 = 7
16 – 7 = 9



3 + 3 + 1 = 7
16 – 7 = 9

87

Find the missing number

2 Kry die ontbrekende getal.
Find the missing number.

11 – 4 = 7	15 – 8 = 7
14 – 6 = 8	12 – 4 = 8
13 – 4 = 9	14 – 7 = 7
15 – 9 = 6	17 – 8 = 9

3 Los op en kleur in.
Solve and colour.

12 – 7 = 5 ●	11 – 6 = 5 ●
17 – 8 = 9 ●	14 – 7 = 7 ●
18 – 9 = 9 ●	16 – 6 = 10 ●
15 – 7 = 8 ●	13 – 8 = 5 ●
14 – 6 = 8 ●	15 – 8 = 7 ●
17 – 9 = 8 ●	16 – 9 = 7 ●

7 8 9 10 11 12 13 14 15 16 17 18

Aftrekking met oorbrugging van 10

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Ons gaan vandag die speletjie, Reg of verkeerd, speel.

Today we are going to play Thumbs up, thumbs down.



1

Julle moet die probleem wat op die bord neergeskryf is, oplos. Wys met jul duim na bo as die antwoord reg is of met jul duim na onder as die antwoord verkeerd is.

You must solve the problem written on the board. Show me thumbs up if the answer is correct, or thumbs down if the answer is incorrect.



2

Moedig die leerders aan om die probleem op te los deur af te trek sonder om te tel. Vra hulle om nie die antwoord uit te skree nie. Loop rond om te kyk hoe die leerders besig is om die probleem op te los. Sodra al die leerders hul duim na bo of na onder wys, bespreek dan die antwoord met die klas.

Encourage the learners to solve the problem by subtracting without counting. Encourage them not to shout out the answer. Walk around to check how learners are solving the problem. When all learners show thumbs up or down, discuss the answer with the class.

Subtraction bridging 10





Gee 'n aantal probleme rakende aftrekking met oorbrugging van 10 wat sowel verkeerd as reg is sodat die leerders dit kan oplos. Moedig hulle aan om so vinnig moontlik te werk en hul duim op of af te wys sodra hulle die antwoord gekry het. Skryf altyd die korrekte antwoorde neer vir diegene wat dit verkeerd gekry het. Moenie verkeerde getalsinne op die bord los nie.

Provide a number of both incorrect and correct subtraction bridging 10 problems for the learners to solve. Encourage learners to work as quickly as possible and to show thumbs up or down when they have the answer. You must always write the correct answers for those which were incorrect. Do not leave incorrect number sentences on the board.

Aftrekking met oorbrugging van 10

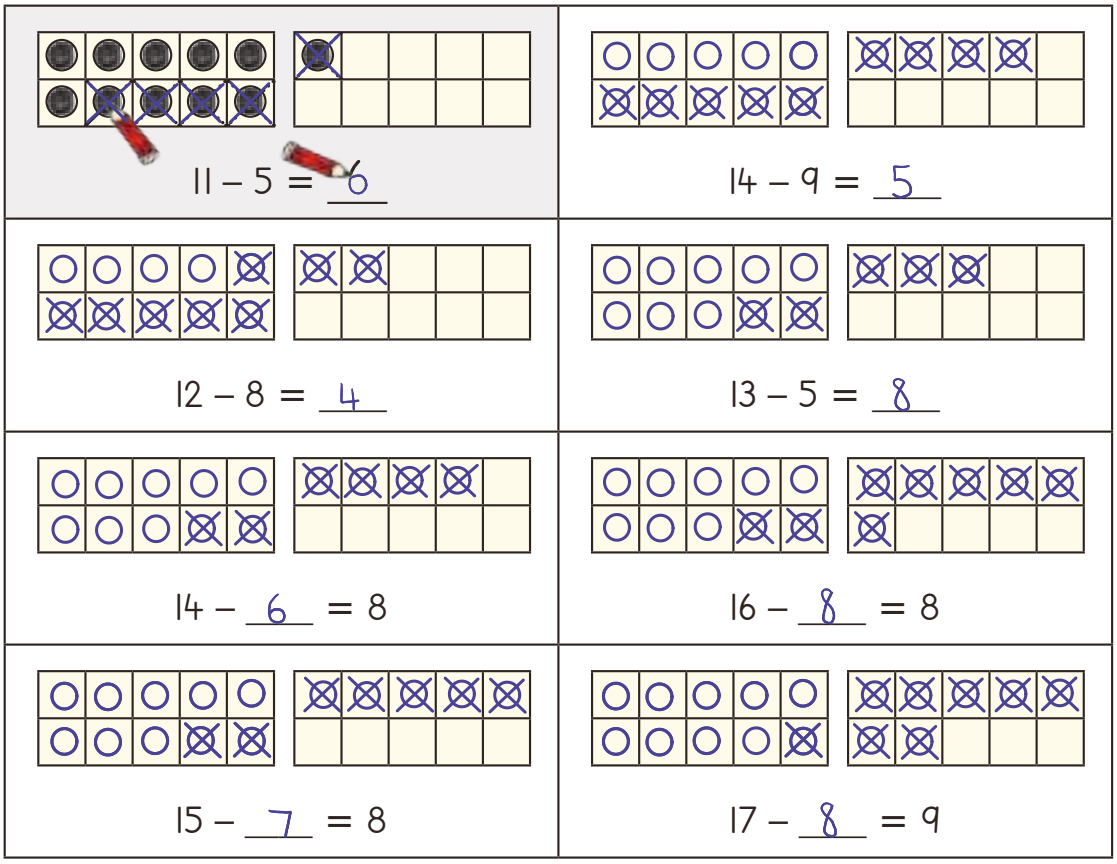
WEEK 9

DAG 4 • DAY 4

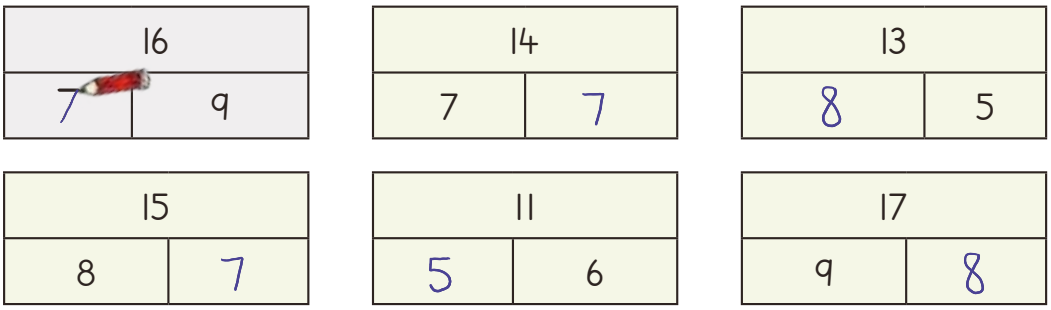
Aftrekking met oorbrugging van 10
Subtraction bridging 10

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Trek af.
Subtract.



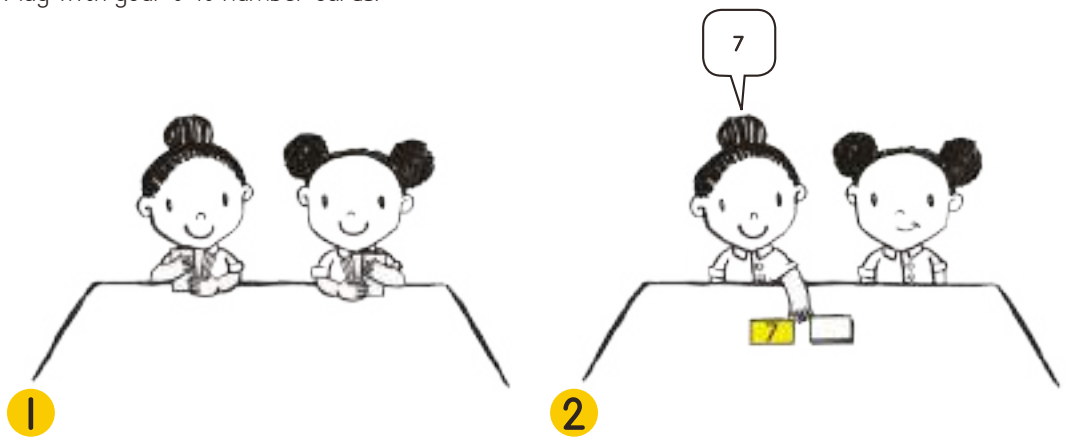
2 Vul die ontbrekende getalle in.
Fill in the missing numbers.



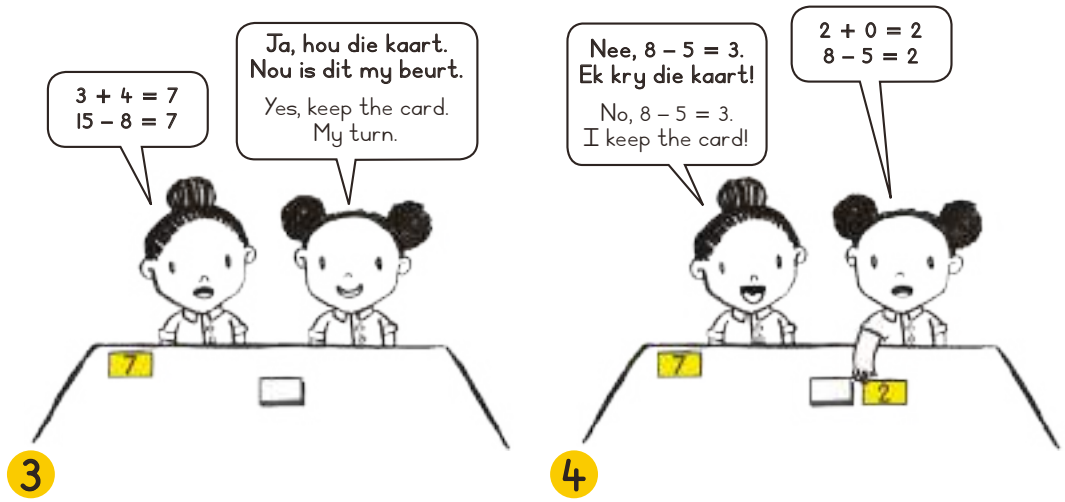
Subtraction bridging 10

Speletjie: Kry my getal!
Game: Make my number!

Speel met julle getalkaarte van 0 tot 10.
Play with your 0–10 number cards.



As jy 'n kaart optel, maak een optellingsgetalsin en een aftrekkingsgetalsin wat gelyk is aan die getal wat op jou kaart gewys word.
When you pick up a card, make one addition number sentence and one subtraction number sentence that equal the number shown on your card.



Hou aan speel totdat al die kaarte op is. Die speler wat meeste kaarte gekry het, is die wenner.
Keep going until all the cards are used. The player who kept the most cards wins.

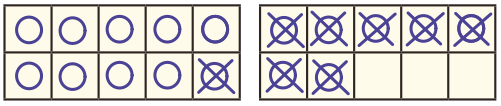
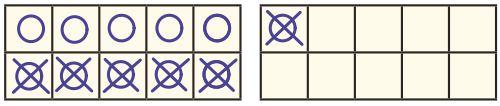
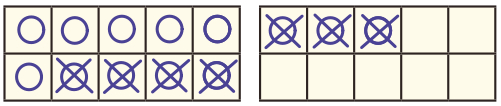
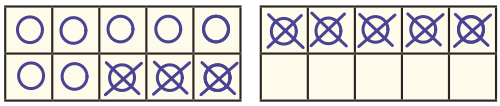
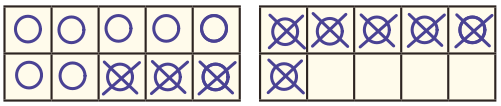
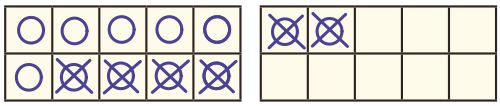
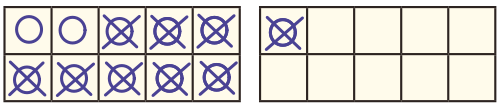
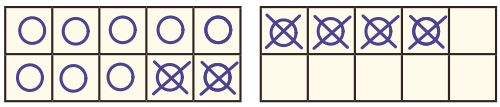
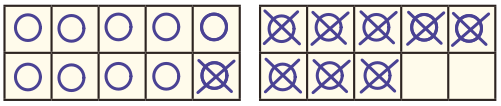
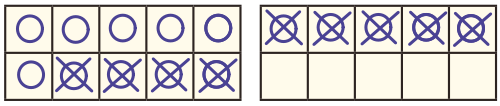
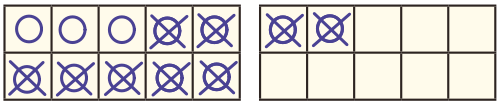
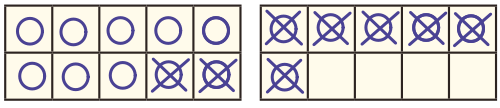
WEEK 9 • WEEK 9

DAG 5 • DAY 5

Vaslegging
Consolidation

HOOFREKENE / MENTAL MATHS | ASSESSERING / ASSESSMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEM SOLVING

1 Trek af.
Subtract.

 17 – 8 = 9	 11 – 6 = 5
 13 – 7 = 6	 15 – 8 = 7
 16 – 9 = 7	 12 – 6 = 6
 11 – 9 = 2	 14 – 6 = 8
 18 – 9 = 9	 15 – 9 = 6
 12 – 9 = 3	 16 – 8 = 8

Assessment and consolidation

2 Vul die ontbrekende getalle in.
Fill in the missing numbers.

8		
3	5	

10		
6	4	

7		
2	5	

12		
3	9	

16		
8	8	

13		
7	6	

14		
9	5	

15		
9	6	

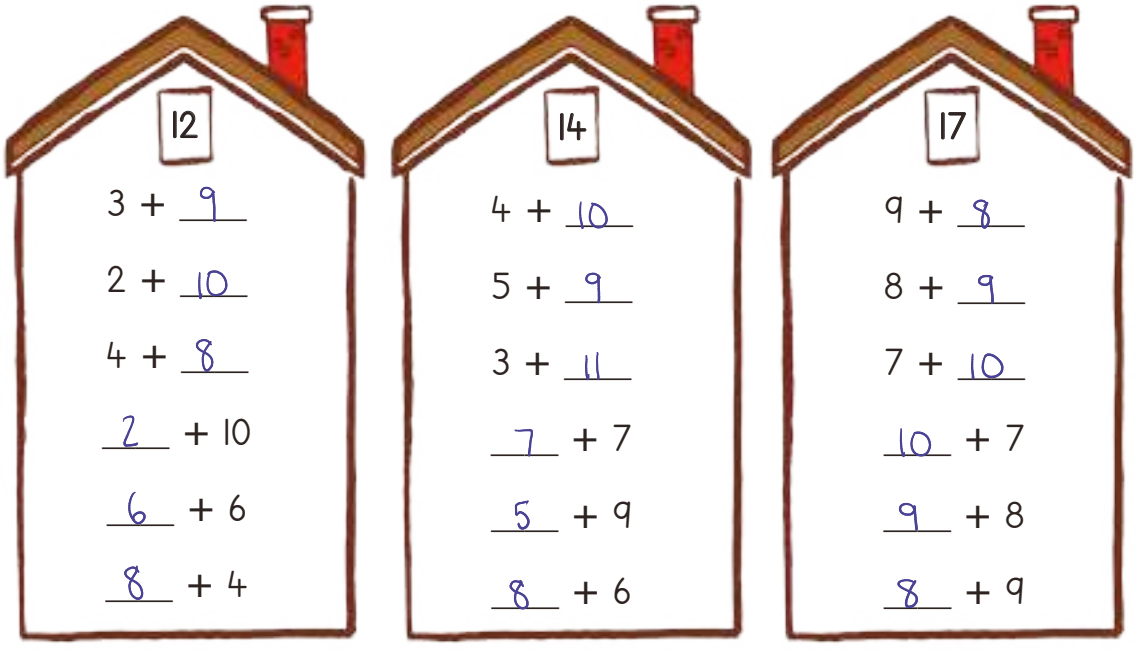
11		
9	2	

17		
8	9	

18		
9	9	

19		
9	10	

3 Voltooi om die getal aan die bokant te kry.
Complete to match the number at the top.



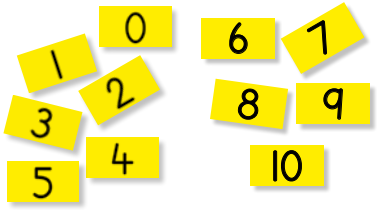
Aftrekkingsprobleme

	Hulpbronne
Hoofrekene: Verdubbelingspeletjie	geen
Speletjie: Kry my getal!	getalkaarte 0 tot 10 (leerders)









Dag	Lesaktiwiteit	Leshulpbronne
1	Aftrekkingswoordprobleme	LB, twee tienrame, 20 tellers
2	Aftrekkingstories	LB, twee tienrame, 20 tellers
3	Getalsinne	LB, 20 tellers
4	Getalkombinasiepatrone	LB, 20 multifix-blokkies, getalkaarte 0 tot 20 (leerders)
5	Vaslegging en assessering vir leer	LB

Na hierdie week behoort die leerder in staat te wees om:	✓
Stories vir **aftrekkings**probleme wat 10 oorbrug, uit te dink om hulle te help om 'n begrip van **woordprobleme** te ontwikkel	
Bewerkings te identifiseer wat nodig is om **getalsinne** te skryf en op te los	
Probleme vinnig en doeltreffend op te los deur **patrone in getalkombinasies** te herken	

Formele assessering

Daar is hierdie week geen formele assessering nie.

Neem die leerders in die klas daagliks waar en maak notas as deel van jou deurlopende informele assessering vir leer.

Subtraction problems

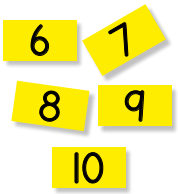
	Resources
Mental Maths: Doubling game	none
Game: Make my number!	learner number cards 0–10











Day	Lesson activity	Lesson resources
1	Subtraction word problems	LB, two ten frames, 20 counters
2	Subtraction stories	LB, two ten frames, 20 counters
3	Number sentences	LB, 20 counters
4	Number bond patterns	LB, 20 multifix blocks, learner number cards 0–20
5	Consolidation and assessment for learning	LB

After this week the learner should be able to:	✓
Create stories for **subtraction** problems that bridge 10, to assist in developing an understanding of **word problems**	
Identify **operations** needed to write and solve **number sentences**	
Solve problems quickly and efficiently by recognising **patterns in number bonds**	

Formal assessment

There is no formal assessment this week.

You should observe the learners in your class daily and make notes as part of your informal ongoing assessment for learning.

Aftrekkingsprobleme

Hoofrekene

Ons speel hierdie week die speletjie, Verdubbeling, om die leerders meer tyd te gee om hul vaardighede in **verdubbeling** te oefen. Speel die speletjie as 'n klas saam en dan in pare.



Speletjie

Kry my getal!



Konsepontwikkeling



Ons konsentreer hierdie week op aftrekking. Die leerders moet aftrekkingswoordprobleme oplos voordat daar op **additiewe getalsinne** en **getalkombinasiepatrone** gekonsentreer word. Terwyl ons met aftrekking en optelling (dag 4) werk, konsentreer ons daarop om:

- aftrekkingswoordprobleme met behulp van tellers en tienrame op te los ten einde die leerders se begrip van plekwaarde te ontwikkel.
- te identifiseer watter bewerking nodig is om getalsinne te kan voltooi, met die besef dat **inverse bewerkings** gebruik kan word om probleme op te los.
- die patrone te herken wat in getalkombinasies duidelik word en probleme vinnig en doeltreffend met hierdie patrone op te los.

Waarna jy hierdie week moet oplet

- Namate die leerders toenemend meer probleme met behulp van tienrame en getallelyne oplos, begin hulle besef dat hulle nie hoef te tel om probleme op te los nie. Moedig die leerders aan om hoofrekene met behulp van getalkombinasies te doen.
- Die leerders moet begin om hul kennis van inverse bewerkings en patrone te gebruik om meer doeltreffend te werk. Dit is uiters belangrik dat hulle hierdie inligting self moet ontdek in plaas daarvan om eenvoudig aangesê te word wat hulle moet doen. Dit is noodsaaklik dat die leerders konseptueel moet verstaan dat 2 + ☐ = 11 byvoorbeeld dieselfde as 11 – 2 = ☐ is.
- Maak seker dat die leerders die woordeskat self gebruik om die taal van wiskunde aan te leer en hul begrip van hierdie konsepte: **'n tien**, **ene**, **tel bymekaar/by**, **en**, **meer as**, **gelyk aan**, **trek af**, **neem weg**, **minder as** te verbeter.

Subtraction problems

Mental Maths

This week we play the Doubling game to give learners more time to practise their **doubling** skills. Play the game as a whole class and then in pairs.



Game

Make my number!



Concept development

This week we focus on subtraction. Learners will solve subtraction word problems, before focusing on **additive number sentences** and **number bond patterns**. In our work on subtraction and addition (Day 4), we will focus on:



- solving subtraction word problems using counters and ten frames to develop learners' understanding of **place value**.
- identifying which operation is needed in order to complete number sentences, recognising that **inverse operations** can be used to solve problems.
- recognising the patterns evident in number bonds and using these patterns to solve problems quickly and efficiently.

What to look out for this week

- As learners solve more and more problems using ten frames and number lines, they will realise that they do not need to count to solve problems. Encourage learners to do calculations mentally using number bonds.
- Learners must start to use their knowledge of inverse operations and patterns to work more efficiently. It is very important that they discover this information for themselves rather than simply being told what to do. It is necessary for learners to conceptually understand that (for example) 2 + ☐ = 11 is the same as 11 – 2 = ☐.
- Ensure that learners use the vocabulary themselves in order to learn the language of mathematics and to better their understanding of these concepts:: **a ten**, **ones**, **add**, **and**, **more than**, **equals**, **subtract**, **take away**, **less than**, **equals**.

Aftrekkingswoordprobleme

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

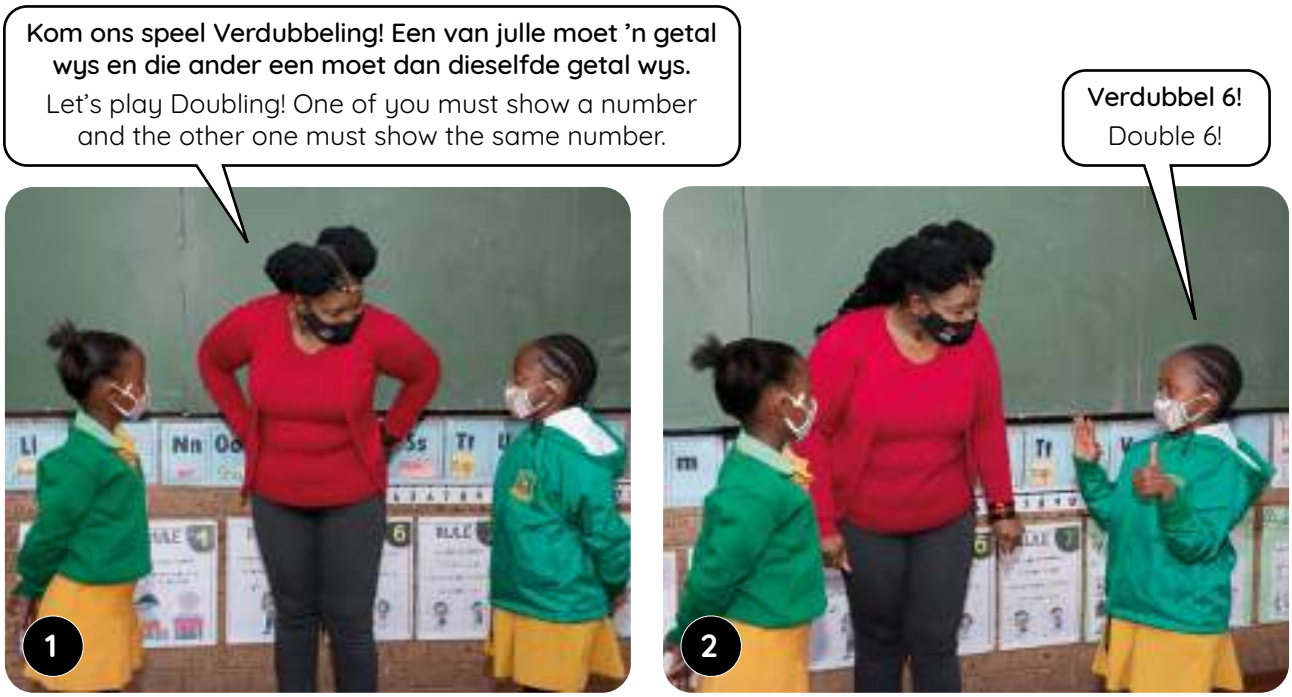
HOOFREKENE | MENTAL MATHS

Speel die Verdubbelingspeletjie.

Play the Doubling game.

Onthou om elke dag die datum na te gaan en die register af te merk.

Remember to check the date and mark the register every day.





Subtraction word problems

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Daar is 14 appels op die tafel. Seliki eet 6 appels op. Hoeveel appels is daar nou?

There were 14 apples on the table.
Seliki ate 6 of them.
How many apples are there now?



Wys met behulp van julle tienrame en tellers hoeveel appels daar oorbly.

Use your ten frames and counters to show how many apples are left.



Ek neem 6 van die volle 10 weg. Daar bly 4 tellers op elke tienraam oor. Daar bly 8 appels oor.

I took away 6 from the full 10. I have 4 counters left over on each ten frame. There are 8 apples left.



Ek neem 6 tellers weg en daar bly 8 tellers oor. Ek stem saam dat daar 8 appels oorbly.

I took away 6 counters and I have 8 counters left. I agree that there are 8 apples left.



Herhaal hierdie stappe met ander aftrekkingswoordprobleme. Gee die leerders baie geleenthede om aftrekkingsprobleme wat 10 oorbrug, op te los.

Repeat these steps with other subtraction word problems. Give the learners lots of opportunities to solve subtraction problems that bridge 10.

Aftrekkingswoordprobleme

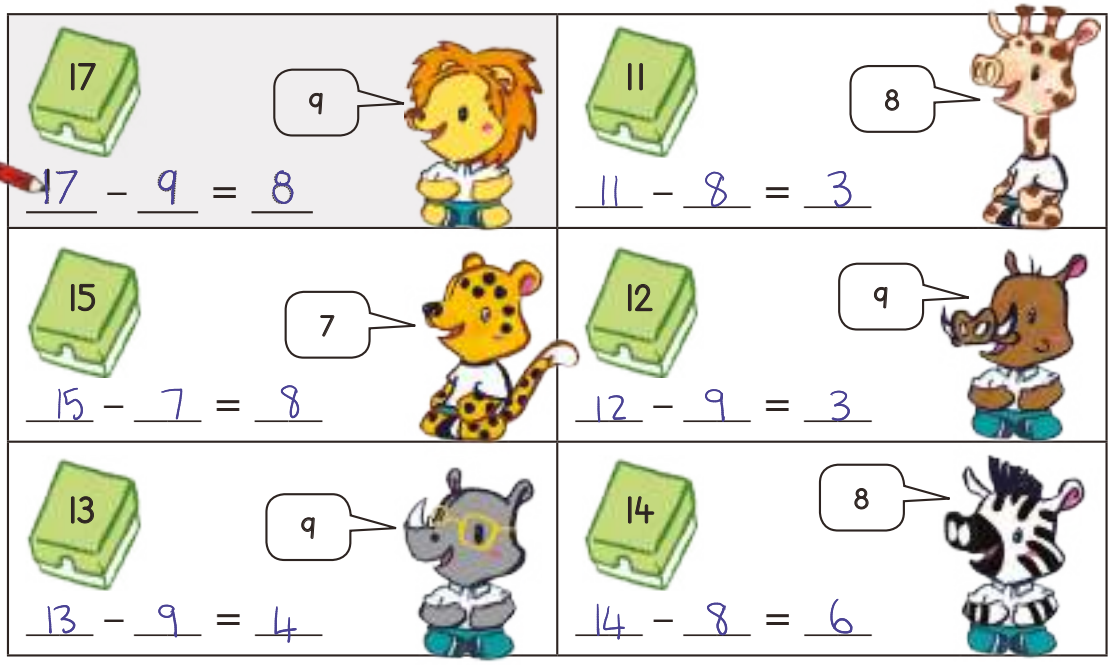
WEEK • WEEK 10

DAG 1 • DAY 1

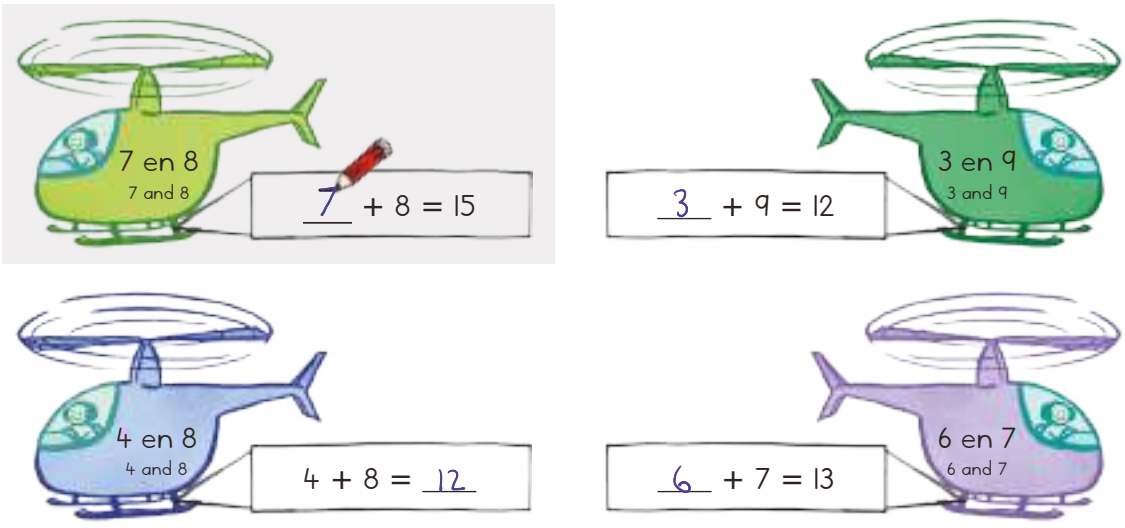
Aftrekkingswoordprobleme
Subtraction word problems

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Hoeveel krale bly oor as ek _____ wegneem?
How many beads are left if I take away ___?



2 Voltooi die getalsinne.
Complete the number sentences.



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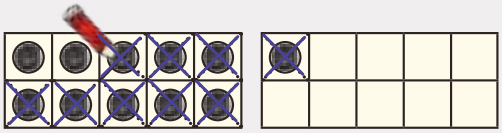
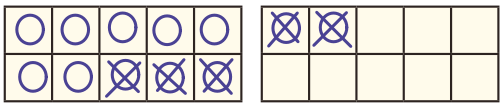
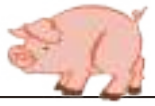
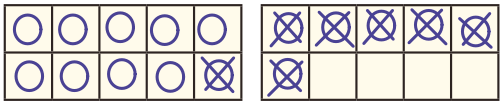
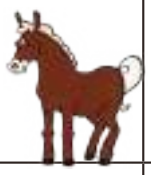
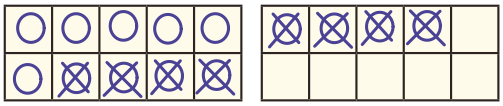
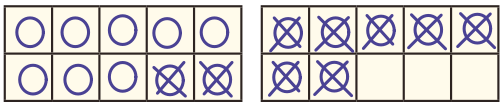
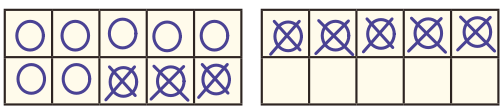
Subtraction word problems

3 Los op.
Solve.

Daar is 11 skape. 9 skape hardloop weg. Hoeveel skape bly oor? There are 11 sheep. 9 of them run away. How many sheep are left? 	 11 − 9 = 2
Daar is 12 koeie. 5 koeie loop na die melkskuur. Hoeveel koeie bly oor? There are 12 cows. 5 go to the milking shed. How many cows are left? 	 12 − 5 = 7
Daar is 16 varke. 7 varke gaan speel in die modder. Hoeveel varke bly oor? There are 16 pigs. 7 go to play in the mud. How many pigs are left? 	 16 − 7 = 9
Daar is 14 perde. 8 perde loop die veld in. Hoeveel perde bly oor? There are 14 horses. 8 go to the field. How many horses are left? 	 14 − 8 = 6
Daar is 17 katte. 9 katte hardloop weg. Hoeveel katte bly oor? There are 17 cats. 9 cats run away. How many cats are left? 	 17 − 9 = 8
Daar is 15 honde. 8 honde hardloop weg. Hoeveel honde bly oor? There are 15 dogs. 8 dogs run away. How many dogs are left? 	 15 − 8 = 7

Aftrekkingstories

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Dink in julle groepe 'n woordprobleem vir die getalsin 15 – 7 = ____ uit.
In your groups, make up a word problem for the number sentence 15 – 7 = ____.



Daar is 15 albasters in die sakkie. 7 van die albasters is rooi en die res is groen. Hoeveel groen albasters is daar?
There are 15 marbles in the bag. 7 of them are red and the rest are green. How many green marbles are there?



Daar is 15 groen albasters en 7 rooi albasters in 'n sakkie. Wat is die verskil tussen die rooi en die groen albasters?
There are 15 green marbles and 7 red marbles in a bag. What is the difference between the red and the green marbles?



Ja! Ons kan verskillende stories vir dieselfde getalsinne uitdink.
Yes! We can make different stories for the same number sentences.



Herhaal die stappe met ander getalsinne. Moedig die leerders aan om hul eie woordprobleme uit te dink en dit aan die klas mee te deel.

Repeat the steps with other number sentences. Encourage learners to create their own word problems and share them with the class.

Subtraction stories

WEEK 10 • WEEK

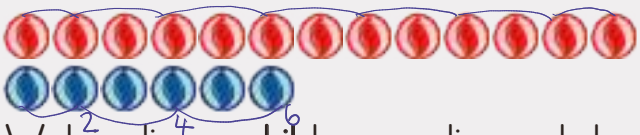
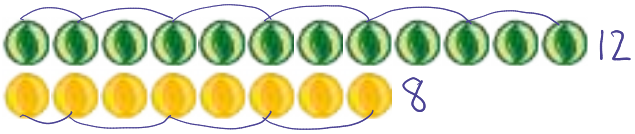
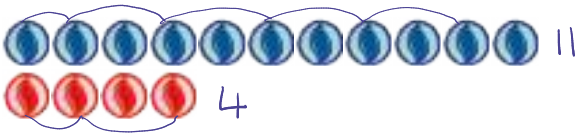
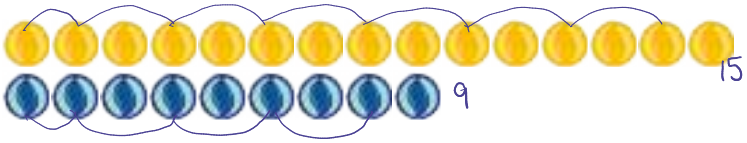
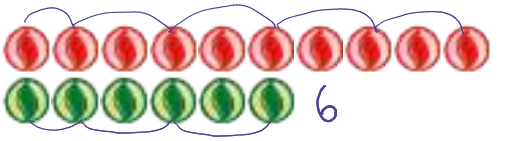
DAG 2 • DAY 2

Aftrekkingstories
Subtraction stories

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Vertel jou maat 'n aftrekkingstorie oor die prent en skryf dan die getalsin neer.

Tell a subtraction story to your partner about the picture and then write the number sentence.

Encourage learners to count in 2s 2 4 6 8 10 12 13	Getalsin Number sentence
 Wat is die **verskil** tussen die aantal rooi albasters en die aantal blou albasters? What is the **difference** between the number of red marbles and blue marbles?	13 − 6 = 7
 12 8	12 − 8 = 4
 11 4	11 − 4 = 7
 15 9	15 − 9 = 6
 10 6	10 − 6 = 4
 14 7	14 − 7 = 7

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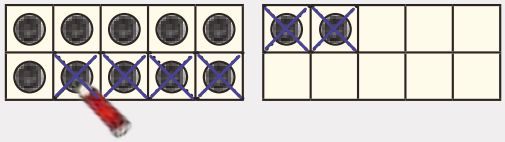
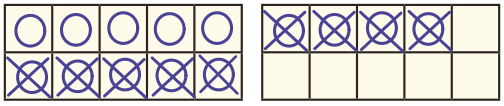
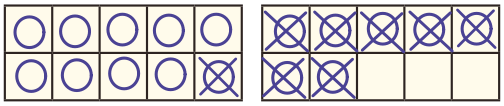
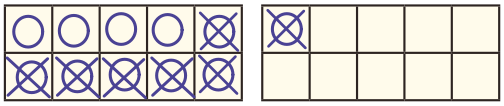
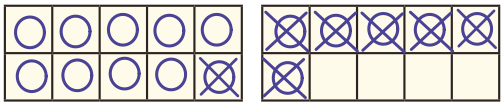
Aftrekkingstories

2 Los die probleme met behulp van die tienrame op.
Solve the word problems using the ten frames.

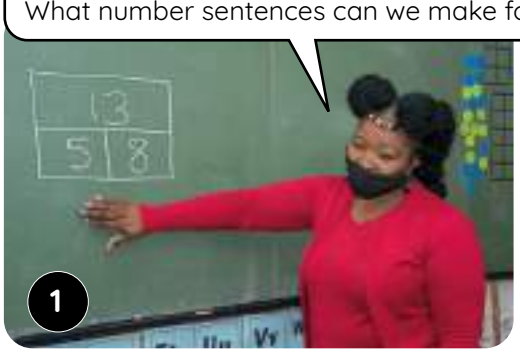
Daar is 12 suigstokkies. 6 word opgeëet. Hoeveel suigstokkies bly oor? There are 12 suckers. 6 are eaten. How many suckers are left? 	 12 – 6 = 6
Daar is 14 suigstokkies. 9 word opgeëet. Hoeveel suigstokkies bly oor? There are 14 suckers. 9 are eaten. How many suckers are left? 	 14 – 9 = 5
Daar is 17 appels. 8 word opgeëet. Hoeveel appels bly oor? There are 17 apples. 8 are eaten. How many apples are left? 	 17 – 8 = 9
Daar is 11 ballonne. 7 sweef weg. Hoeveel ballonne bly oor? There are 11 balloons. 7 float away. How many balloons are left? 	 11 – 7 = 4
Daar is 16 blomme. 7 word weggegee. Hoeveel blomme bly oor? There are 16 flowers. 7 are given away. How many flowers are left? 	 16 – 7 = 9

Number sentences

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT

Watter getalsinne kan ons vir hierdie getaltabel maak?
What number sentences can we make for this number table?



1



2

Ons kan al hierdie getalsinne met behulp van hierdie getaltabel neerskryf.
We can write all of these number sentences using this number table.



3

Kom ons doen dieselfde met hierdie getaltabel.
Let's do the same with this number table.



4

Sit tyd opsy sodat die leerders met al die getalsinne, wat met die getalle in die getaltabel verband hou, vorendag kan kom. Skryf saam as klas al die getalsinne neer wat julle kan maak vir elke getaltabel wat jy op die bord vir hulle wys.

Allow learners time to come up with all the number sentences related to the numbers in the number bond table. Together as a class, write all the number sentences you can for each number table you show on the board.

Herhaal die stappe met verskillende getalle in die tabel. Laat die leerders die getalsinne bespreek en maak sodoende seker dat hulle die bewerkings en simbole, wat telkens gebruik word, herken. Moedig hulle aan om die kommutatiwiteit van optelling raak te sien, selfs al leer jy hulle nie die woord 'kommutatief' nie.

Repeat the steps with different numbers in the table. Allow learners to discuss the number sentences, ensuring that they recognise the operations and symbols that are used each time. Encourage them to notice the commutativity of addition, even if you do not teach them the word commutative.

WERKKAART | WORKSHEET

WEEK • WEEK 10

DAG 3 • DAY 3

Getalsinne
Number sentences

HOOFREKENE MENTAL MATHS → KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Skryf vier getalsinne vir elke getalkombinasietabel.
Write four number sentences for each bond table.

	15 / 6 | 9	6 + 9 = 15 9 + 6 = 15	15 − 6 = 9 15 − 9 = 6
	11 / 3 | 8	3 + 8 = 11 8 + 3 = 11	11 − 3 = 8 11 − 8 = 3
	12 / 7 | 5	7 + 5 = 12 5 + 7 = 12	12 − 7 = 5 12 − 5 = 7
	16 / 9 | 7	9 + 7 = 16 7 + 9 = 16	16 − 9 = 7 16 − 7 = 9
	14 / 6 | 8	6 + 8 = 14 8 + 6 = 14	14 − 6 = 8 14 − 8 = 6
	17 / 8 | 9	8 + 9 = 17 9 + 8 = 17	17 − 8 = 9 17 − 9 = 8

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Number sentences

Learners' answers will vary. Any correct combination may be given.

2 Vul die getalkombinasietabelle in om die boonste getal te maak.

Fill the bond tables to make the top number.

11	
6	5

14	
9	5

12	
8	4

13	
9	4

12	
7	5

15	
9	6

16	
8	8

17	
9	8

18	
10	8

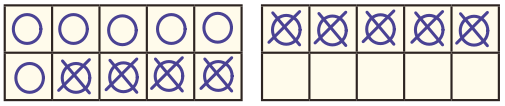
2 Los op.

Solve.

Daar is 14 voëls in die boom.
8 voëls vlieg weg.
Hoeveel voëls bly oor?

There are 14 birds in the tree.
8 of them fly away.
How many birds are left?



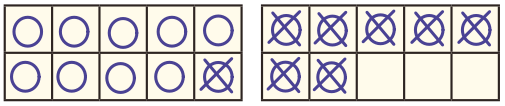


14 – 8 = 6

Daar is 17 plakkers.
Mpho vat 8 plakkers.
Hoeveel plakkers bly oor?

There are 17 stickers.
Mpho takes 8 stickers.
How many stickers are left?



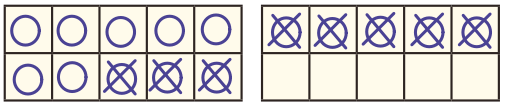


17 – 8 = 9

Daar is 15 eiers in die mandjie.
8 eiers breek. Hoeveel eiers bly oor?

There are 15 eggs in the basket.
8 of them get broken.
How many eggs are left?



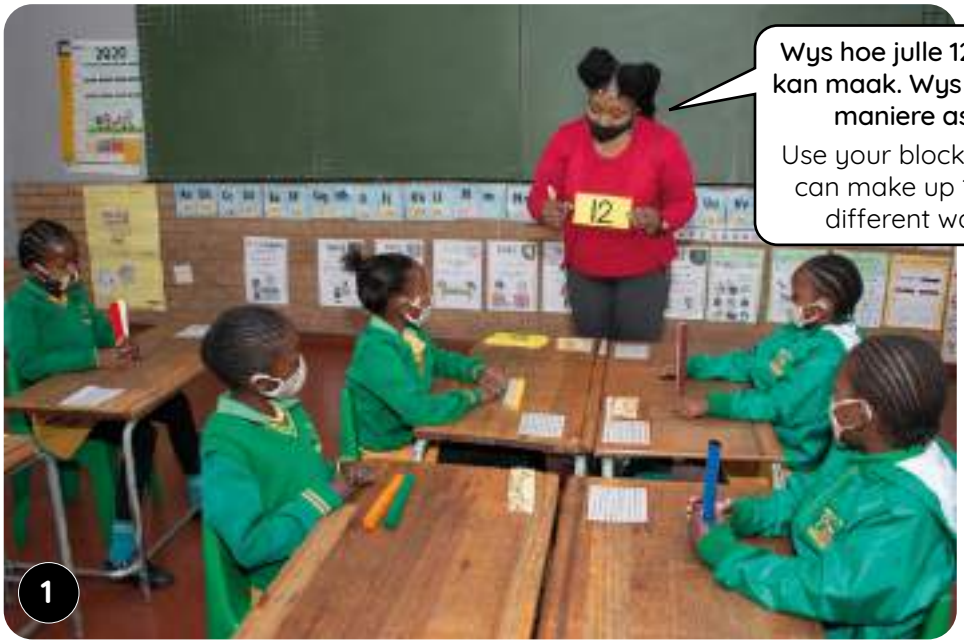


15 – 8 = 7

Getalkombinasiepatrone

HOOFREKENE / MENTAL MATHS | KONSEPONTWIKKELING / CONCEPT DEVELOPMENT → GROEPWERK / GROUP WORK → SPELETJIE / GAME → AKTIWITEITE / ACTIVITIES → PROBLEEMOPLOSSING / PROBLEEM SOLVING

KONSEPONTWIKKELING | CONCEPT DEVELOPMENT



1

Wys hoe julle 12 met julle blokkies kan maak. Wys soveel verskillende maniere as wat julle kan.

Use your blocks to show how you can make up 12. Show as many different ways as you can.



2

Hoe het jy 12 gemaak?

How did you make 12?

Laat die leerders met soveel verskillende getalsinne vorendag kom as wat hulle kan deur die getalsinne met hul blokkies te wys. Skryf al die getalsinne op die bord neer sodat die leerders die patroon kan sien.

Allow learners to come up with as many different number sentences as they can, using their counters to show the number sentence. Write all the number sentences on the board so that learners can see the pattern.

Number bond patterns



Wat merk julle omtrent die getalsinne op?
What do you notice about the number sentences?



Die getalle links van die plusteken word groter namate daar met die lys afbeweeg word.
The numbers on the left of the plus sign get bigger as you go down the list.



Daar is hope getalsinne wat ons kan maak!
There are lots of number sentences we can make!



Die getalle regs van die plusteken word kleiner namate daar met die lys afbeweeg word.
The numbers on the right of the plus sign get smaller as you go down the list.



Kom ons sien hoeveel getalsinne ons vir die getal 17 kan maak.
Let's see how many number sentences we can make for the number 17.

Herhaal die stappe hier bo met verskillende getalle. Laat die leerders die getalsinne en die patrone wat hulle kan raaksien, met mekaar bespreek.

Repeat the steps above with different numbers. Allow learners to discuss the number sentences and the patterns they can see.

WEEK • WEEK 10

DAG 4 • DAY 4

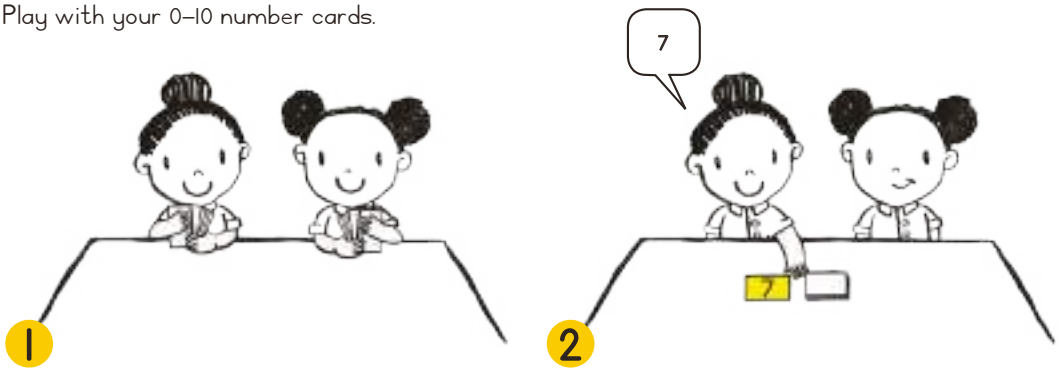
Getalkombinasiepatrone
Number bond patterns

HOOFREKENE MENTAL MATHS | KONSEPONTWIKKELING CONCEPT DEVELOPMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

Speletjie: Kry my getal!
Game: Make my number!

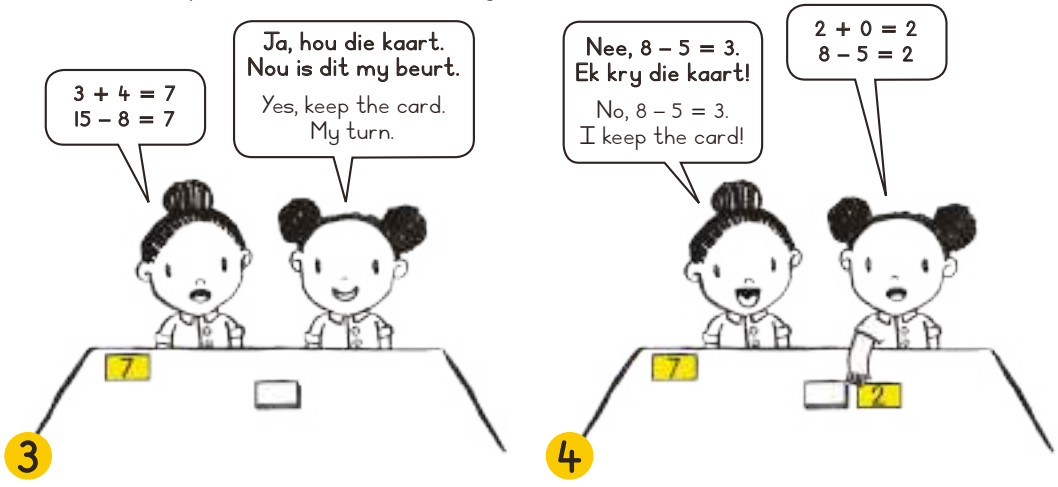
Speel met julle getalkaarte van 0 tot 10.

Play with your 0–10 number cards.



As jy 'n kaart optel, maak een optellingsgetalsin en een aftrekkingsgetalsin wat gelyk is aan die getal wat op jou kaart gewys word.

When you pick up a card, make one addition number sentence and one subtraction number sentence that equal the number shown on your card.



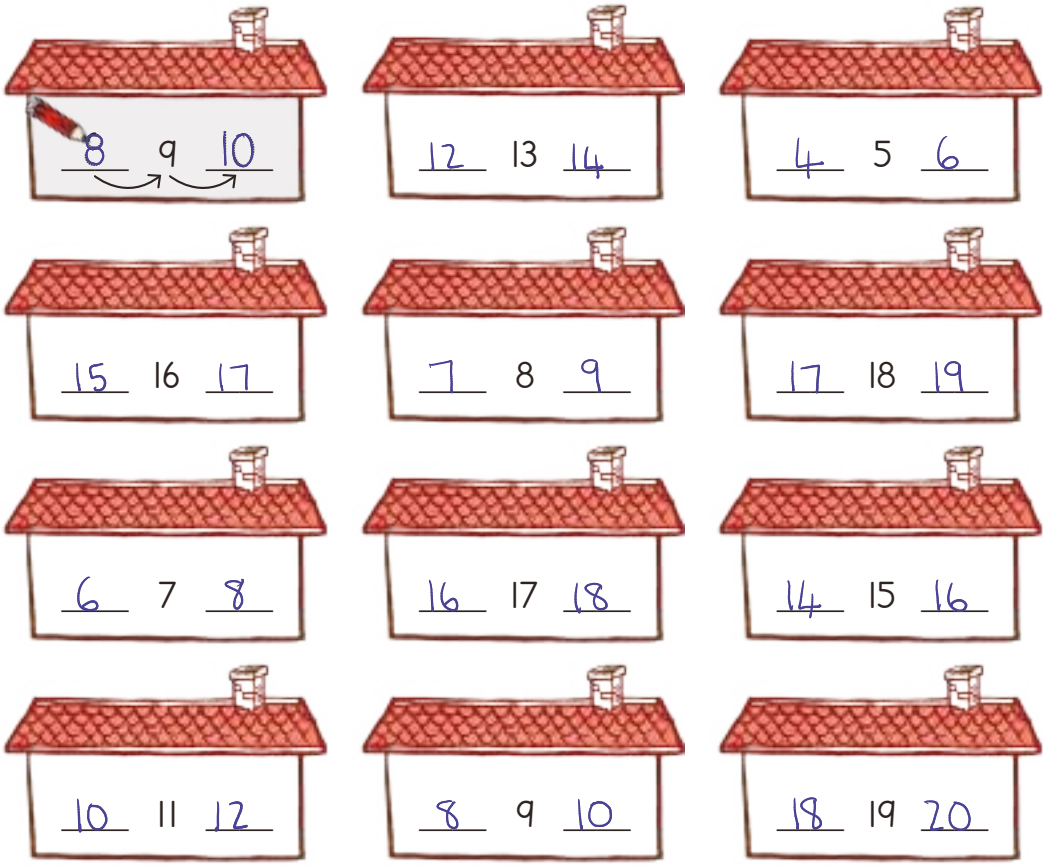
Hou aan speel totdat al die kaarte op is. Die speler wat die meeste kaarte gekry het, is die wenner.

Keep going until all the cards are used. The player who kept the most cards wins.

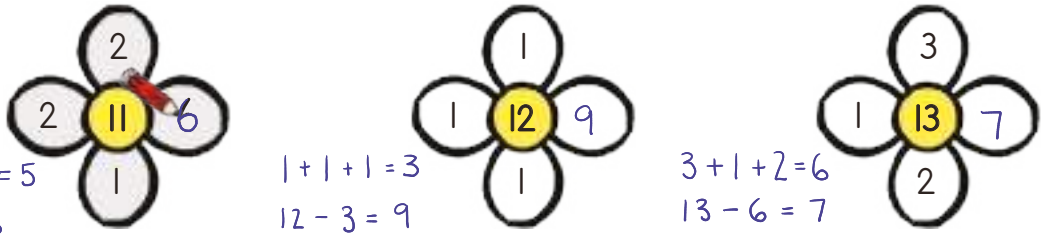
99

Number bond patterns

1 Skryf die getal in wat **voor** en **na** die gegewe getal staan.
Write the number that comes **before** and **after**.



2 Kry die ontbrekende getal.
Find the missing number.



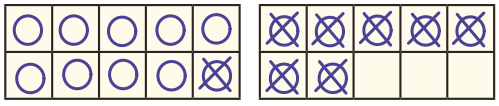
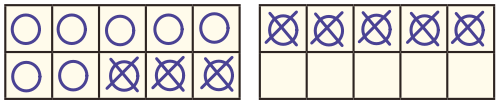
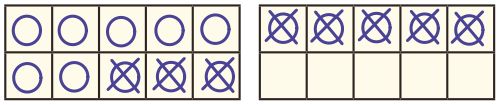
WEEK • WEEK 10

DAG 5 • DAY 5

Vaslegging
Consolidation

HOOFREKENE MENTAL MATHS | ASSESSERING ASSESSMENT → GROEPWERK GROUP WORK → SPELETJIE GAME → AKTIWITEITE ACTIVITIES → PROBLEEMOPLOSSING PROBLEM SOLVING

1 Los die woordprobleme met behulp van die tienrame op.
Solve the word problems using the ten frames.

Daar is 17 appels. 8 word opgeëet. Hoeveel appels bly oor? There are 17 apples. 8 are eaten. How many apples are left? 	 17 − 8 = 9
Daar is 15 ballonne. 8 ballonne sweef weg. Hoeveel ballonne bly oor? There are 15 balloons. 8 float away. How many balloons are left? 	 15 − 8 = 7
Daar is 14 blomme. 7 blomme word weggegee. Hoeveel blomme bly oor? There are 14 flowers. 7 are given away. How many flowers are left? 	 14 − 7 = 7

2 Vul die getalkombinasietabelle in om die boonste getal te maak. Learners' answers will vary. Any correct combination may be given.
Fill the bond tables to make the top number.

17	
9	8

14	
8	6

11	
9	2

13	
8	5

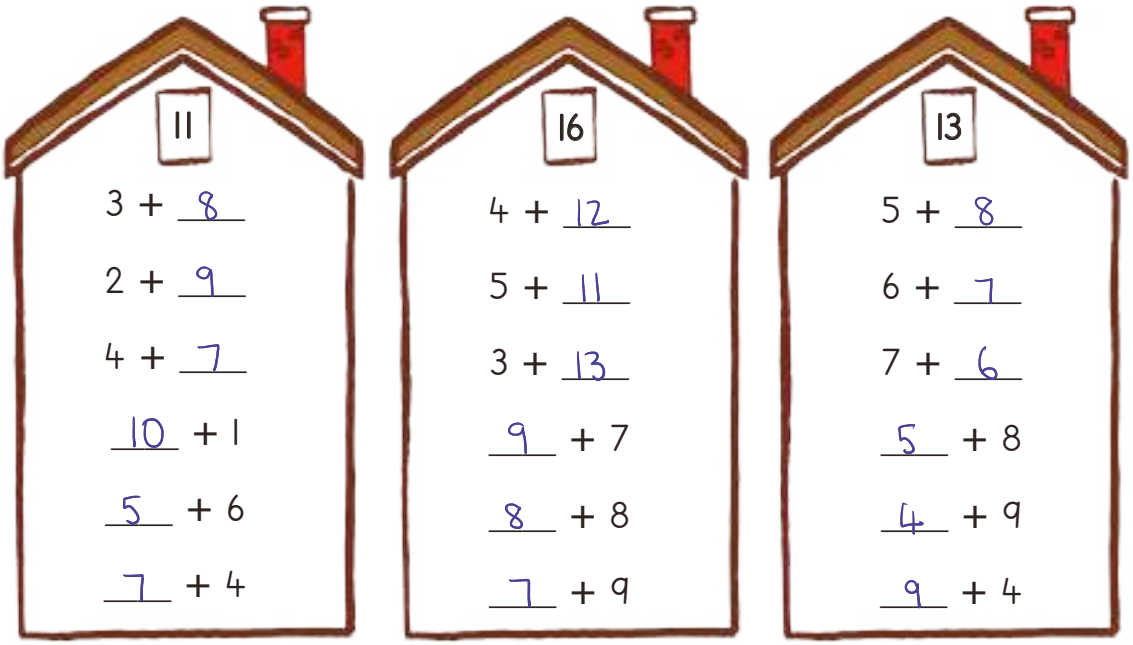
15	
9	6

18	
7	9

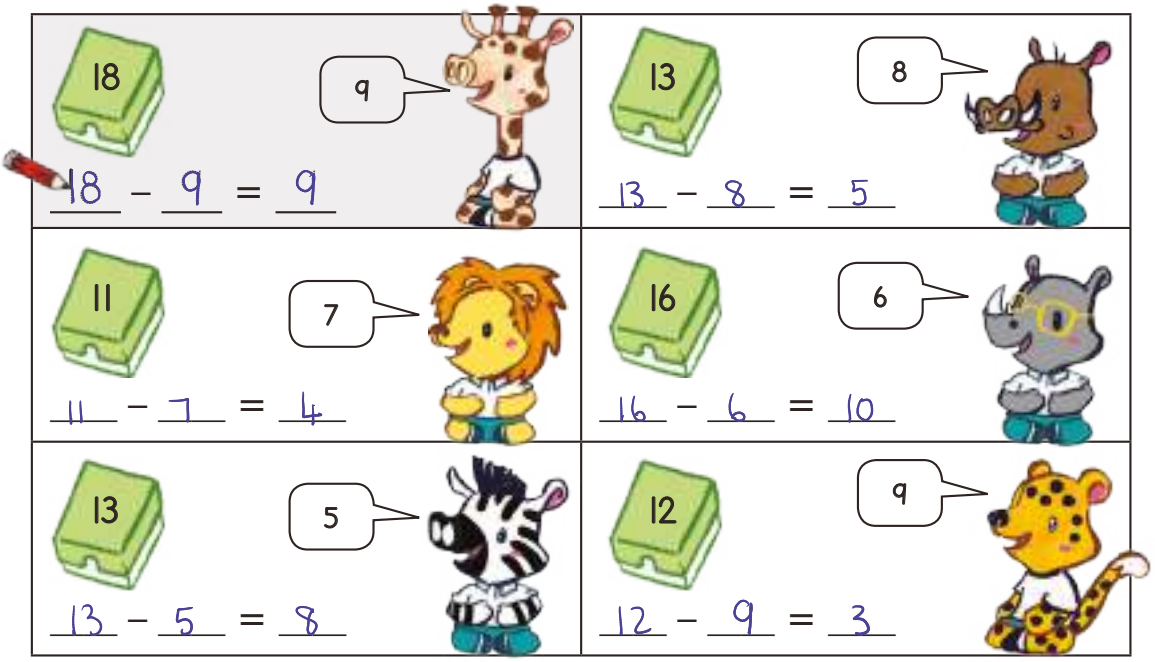
101

Assessment and consolidation

3 Voltooi om die boonste getal te kry.
Complete to match the number at the top.



4 Hoeveel krale bly oor as ek _____ wegneem?
How many beads are left if I take away ___?



Onderwyser se aantekeninge

Teacher notes

Onderwyser se aantekeninge

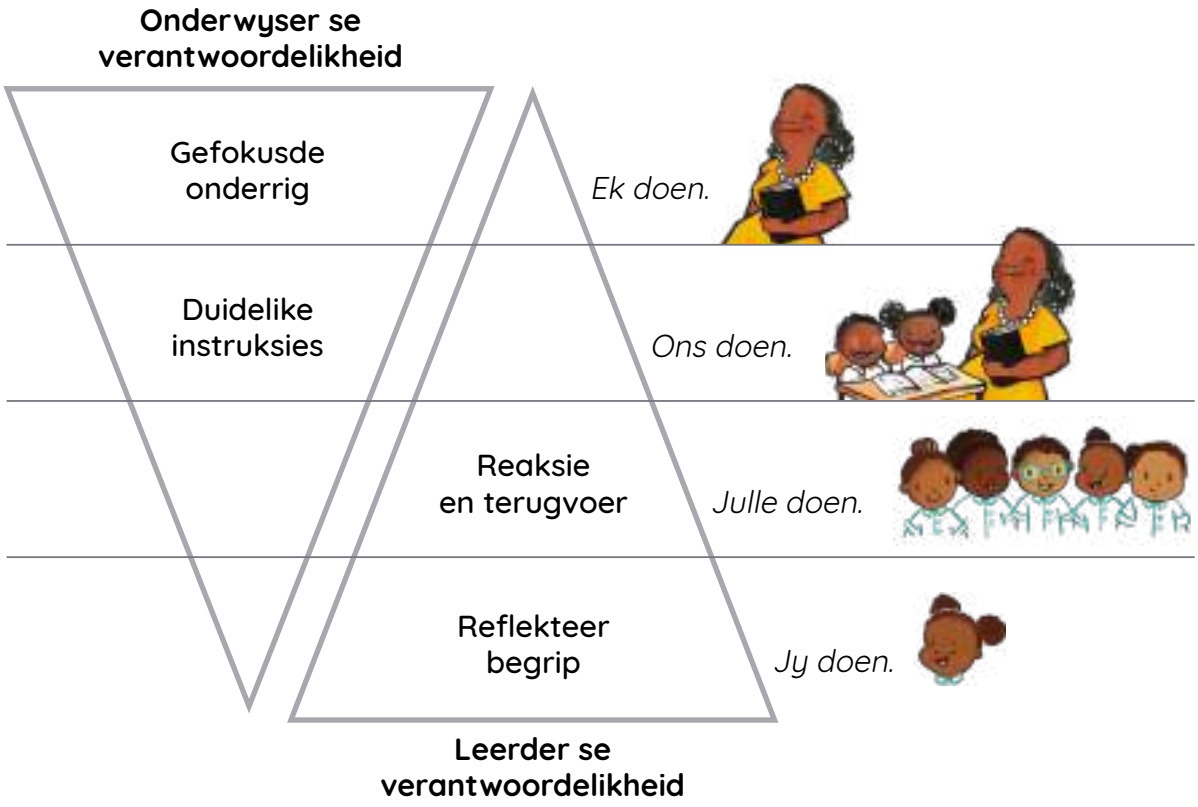
Teacher notes

Onderwyser se aantekeninge

Teacher notes

Bala Wande

Calculating with Confidence



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make maths count

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