Term 1

When you work with multiple-choice questions, you only need to circle the letter next to the correct answer.

Activity 1

Count and compare numbers

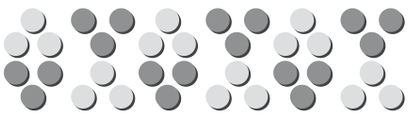
Content Area 1: Numbers, operations and relationships
Topic 1.1: Whole numbers

Work with the class.

1. How many counters are in each group? Count aloud in your groups.

a) 

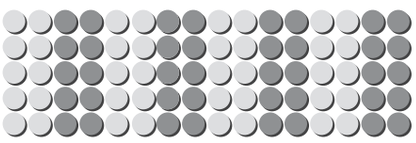
_____

b) 

_____

c) 

_____

d) 

_____

We use the relation signs <, > and = to **compare** numbers.

2. Fill in the relation sign <, > or = to make each statement correct.

a) 1 880 ____ 1 808 **b)** 4 404 ____ 4 440

c) 9 872 ____ 9 782 **d)** 5 055 ____ 5 500

Work on your own.

1. Choose the missing number in each number pattern.

a) 575; 550; 525; _____; 475

A 425 **B** 400 **C** 500 **D** 450

b) 770; 780; 790; _____; 810

A 600 **B** 720 **C** 750 **D** 800

c) 629; 729; 829; 929; _____

A 1 290 **B** 1 029 **C** 1 209 **D** 1 092

d) 221; 223; 225; 227; _____

A 229 **B** 231 **C** 228 **D** 232

e) 454; 456; 458; _____; 462

A 459 **B** 500 **C** 460 **D** 452

2. Complete each pattern.

a) 9 000; 7 000; 5 000; _____; 1 000

b) 10 000; 8 000; 6 000; _____; 2 000

c) 8 000; 4 000; 2 000; 1 000; _____

3. Fill in <, > or = to make the correct number statement.

a) 2 694 _____ 2 964 **b)** 5 085 _____ 5 058

Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

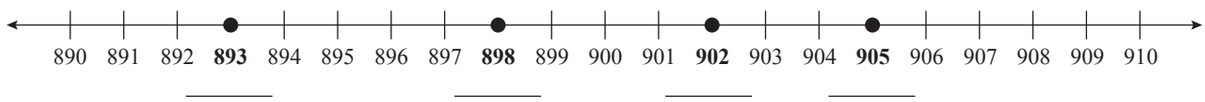
Activity 2

Represent and round off numbers; place value

Content Area: Numbers, operations and relationships
Topic 1.1: Whole numbers

Work with the class.

1. Round off each number at a dot to the nearest 5, 10 and 100.



_____ _____ _____ _____

Look for the **multiples** of 5, 10 and 100 that are closest to the number you must round off.

2. Which number is represented on each abacus?

a) **b)** **c)**

_____ _____ _____

We say one **abacus**, and many **abacuses** or **abaci**.

Work on your own.

1. Write the value of the underlined digit in each number.

a) 6 781 _____ **b)** 9 503 _____

c) 2 974 _____ **d)** 8 166 _____

2. The number 7 628 rounded off to the nearest:

a)	10 is →	**A**	7 620	**B**	7 720	**C**	7 630	**D**	7 640
b)	100 is →	**A**	7 700	**B**	7 600	**C**	8 600	**D**	7 500
c)	1 000 is →	**A**	7 000	**B**	8 000	**C**	6 000	**D**	7 000

3. Choose the correct term to describe the numbers in each sequence.

Even numbers	Multiples of 5	Odd numbers

a) 21; 23; 25; 27; 29 _____

b) 60; 58; 56; 54; 52 _____

c) 0; 5; 10; 15; 20 _____

Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

Activity 3

Commutative property; properties of zero; patterns in calculations with multiples of 10, 100 and 1 000

Content Area 2: Patterns, functions and algebra
Topic 2.3: Number sentences

Number sentence:
4 + 3 = 7.
Open number sentence:
4 + ☐ = 7.

Work on your own.

1. Fill in the missing number to make each statement true.

a) 14 × 4 = 4 × _____ **b)** 16 + 7 = _____ + 16

c) 4 × 5 = _____ × 4

2. Complete the number sentences.

a)	20 – 6 = _____	200 – 6 = _____	2 000 – 6 = _____
b)	40 – 5 = _____	400 – 5 = _____	4 000 – 5 = _____
c)	3 × 3 = _____	30 × 3 = _____	300 × 3 = _____
d)	8 ÷ 4 = _____	80 ÷ 4 = _____	800 ÷ 4 = _____
e)	7 + 9 = _____	70 + 90 = _____	700 + 900 = _____

A **number** sentence is also called an **equation**.

3. Complete each equation.

a) 31 – 31 = _____ **b)** 78 – 78 = _____

c) 123 – 123 = _____ **d)** 10 – 2 + 2 = _____

e) 20 – 5 + 5 = _____ **f)** 30 – 6 + 6 = _____

4. Write whether each statement is true or false.

a) 6 + 7 = 7 + 6 _____ **b)** 14 – 4 = 4 – 14 _____

c) 6 ÷ 3 = 3 ÷ 6 _____

5. Fill in the missing symbol to make each statement true.

a) If ■ + ♦ = ▲, then ▲ + ♦ = _____

b) If ■ × ■ = ♦, then ♦ ÷ ■ = _____

c) If ▲ – ★ = ■, then ■ + ★ = _____

Share your solutions with the class.
Divide your score by 3. Then record your score out of 10 on your Mental Maths grid.

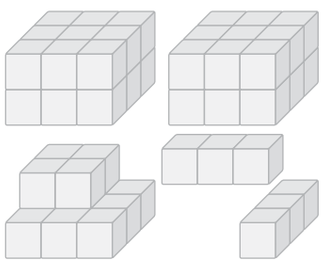
Activity 4 Write and solve number sentences and operations in brackets

Content Area 2: Patterns, functions and algebra
Topic 2.3: Number sentences

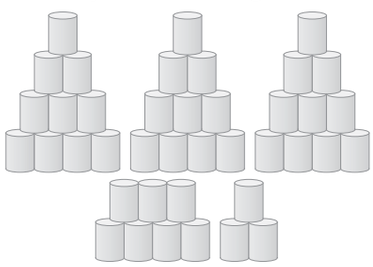
Work with the class.

1. Calculate the total number of cubes and cylinders in each diagram. Write number sentences on the board to show your thinking.

a)



b)



_____ _____

2. Write a number sentence for each word sentence.

a) Eight divided by four is equal to ten divided by five.

_____

b) Double twelve is equal to three times eight.

_____

First solve operations in **brackets**, then **multiply** or **divide**, then **add** or **subtract** from left to right.

Work on your own.

1. Complete each number sentence.
   - **a)** 18 = 6 × _____
   - **b)** 0 × (15 – 8) + 4 = _____
   - **c)** _____ = 30 ÷ 5
   - **d)** 7 + (12 – 9) × 0 = _____
2. Write a number sentence for each word sentence.
   - **a)** Half of twenty is equal to fifty divided by five.

     _____
   - **b)** Four multiplied by four is equal to half of thirty-two.

     _____
   - **c)** Double fifteen is equal to fifty minus twenty.

     _____
3. Fill in the missing number in each equation.
   - **a)** (3 × 7) + 4 + (5 × 0) = _____
   - **b)** 12 + 34 = 10 + 2 + _____ + 4
   - **c)** 29 + 16 = 29 + 1 + _____

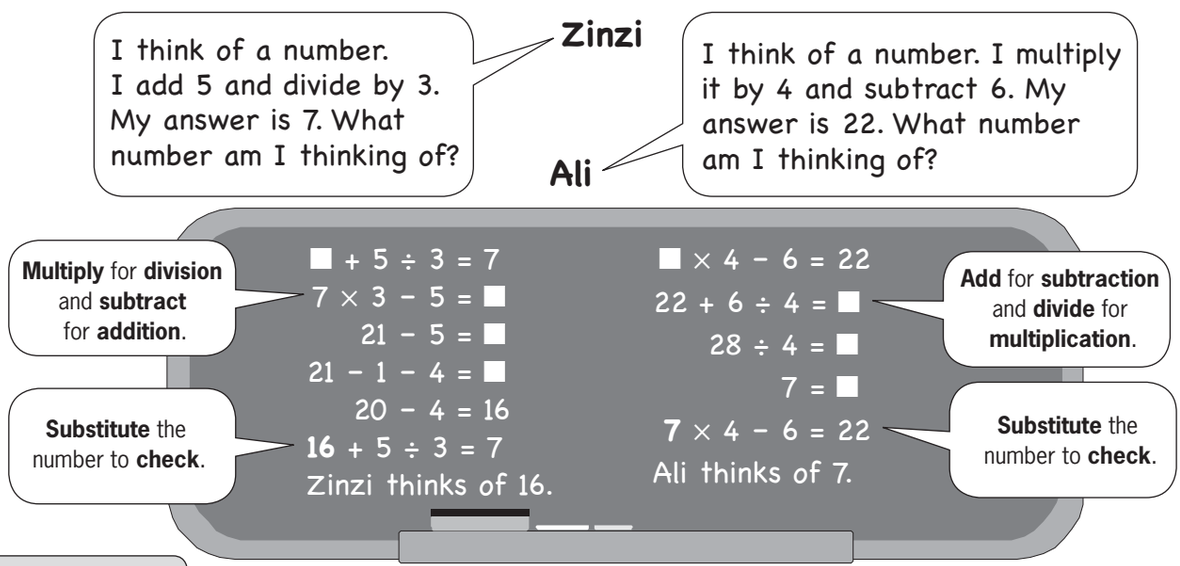
Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

Activity 5 Solve number sentences by inspection, substitution and inverse operations

Content Area 2: Patterns, functions and algebra
Topic 2.3: Number sentences

Work with the class.

1. Discuss the learners' number puzzles and the methods used.



× and ÷ are **inverse operations.** + and – are also inverse operations.

2. Use inverse operations to solve each equation.
   - **a)** _____ – 8 × 4 = 28
   - **b)** _____ ÷ 6 + 7 = 13

Work on your own.

1. Complete each equation.
   a) _____ + 9 ÷ 5 = 6
   b) _____ × 3 – 6 = 18
2. Fill in the missing number to solve each equation.
   a) 10 × _____ = 8 × 5
   b) 5 × _____ = 20 + 5
   c) 6 × 6 = 18 × _____

Share your solutions with the class.
Multiply your score by 2. Then record your score out of 10 on your Mental Maths grid.

Activity 6 Basic addition and subtraction facts

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work on your own.

1. Fill in the missing number to make each statement true.
   a) 100 – 60 = _____
   b) 40 + _____ = 100
   c) 200 – 10 = _____
   d) 70 + _____ = 300
2. Complete each number sentence. Look for patterns.
   a) 7 + 2 = _____
      70 + 20 = _____
      700 + 200 = _____
   b) 13 – 9 = _____
      130 – 90 = _____
      1 300 – 900 = _____
3. Complete these basic addition and subtraction facts.

9 + 7 =	16 – 7 =	18 + 5 =	17 – 9 =	28 + 5 =
19 + 7 =	26 – 7 =	28 + 5 =	37 – 9 =	68 + 5 =

Share your solutions with the class.
Divide your score by 2. Then record your score out of 10 on your Mental Maths grid.

Activity 7 Inverse operations and the associative property

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work on your own.

1. Use inverse operations to complete each number sentence.
   a) 10 + _____ = 90
   b) 100 + _____ = 900
   c) _____ + 20 = 100
   d) _____ + 30 = 90
   e) _____ – 80 = 80
   f) _____ – 70 = 70
2. Fill in the missing number to make each statement true.
   a) (6 + 8) + 12 = 6 + (12 + _____)
   b) (16 – 9) – 7 = 16 – (_____ – 7)
   c) 23 + (9 + 7) = (23 + _____) + 9
   d) 45 – (8 – 5) = (45 – _____) – 8

Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

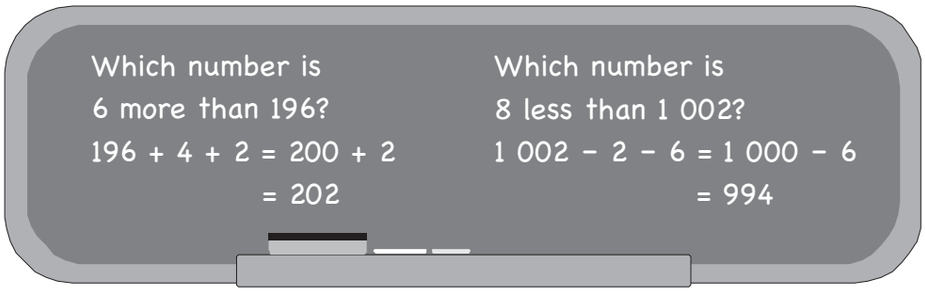
Activity 8

Build up and break down to add, subtract and compare numbers

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work with the class.

1. Explore the strategies used to add and subtract using multiples of 100 and 1 000.



2. Use the methods above to solve these problems.
   a) Which number is 9 more than 297? _____
   b) Which number is 7 more than 995? _____

Work on your own.

Use the methods above to solve these problems.

Try to do the calculations in your head.

1. Which number is:
   a) 8 more than 96 _____
   b) 7 more than 238 _____
   c) 9 more than 1 094 _____
   d) 6 more than 898 _____
   e) 5 more than 2 999? _____
2. Which number is:
   a) 7 less than 104 _____ b) 9 less than 506 _____
   c) 8 less than 802 _____ d) 6 less than 254 _____
   e) 4 less than 3 002? _____

Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

Activity 9

Add and subtract using properties of numbers

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work with the class.

1. Find the number to replace ♦ that makes each statement true.
   a) 18 + 12 = ♦ + 18 ♦ = _____
   b) 24 + 9 + 6 = 24 + ♦ + 9 ♦ = _____
   c) 1 879 + 8 = 8 + ♦ ♦ = _____

d) 45 + 7 + 5 = 45 + 5 + ♦ ♦ = _____

e) 27 + 32 = ♦ + 7 + 30 + ♦ ♦ = _____

f) 64 – 8 – 4 = 64 – ♦ – 8 ♦ = _____

2. Solve the equations in question 1.

a) _____ **b)** _____ **c)** _____

d) _____ **e)** _____ **f)** _____

You swap, group and regroup numbers to add and subtract.

3. Discuss how you found the number in each statement in class.

Work on your own.

Find the missing number to make each statement true. Then solve each equation.

1. 27 + 13 = 13 + _____ = _____

2. 46 – 9 – 6 = 49 – _____ – 9 = _____

3. 38 + 31 = 30 + 8 + _____ + 1 = _____

4. 44 – 13 = 44 – 10 + 4 – _____ = _____

5. (57 + 9) + 3 = 57 + _____ + 9 = _____

Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.

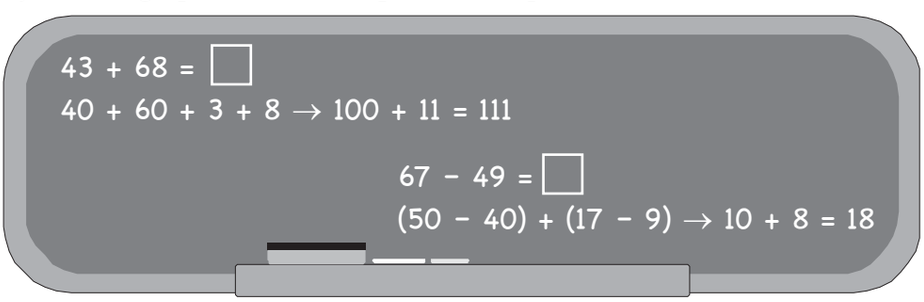
Activity 10 Break up numbers to add and subtract

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work with the class.

→ shows a calculation still in progress.
= indicates the last step.

1. Explore and discuss the strategies that show how to add and subtract by breaking up numbers into place value parts.



2. Use the strategies to solve these problems.

a) 74 + 49 = _____

b) 83 – 37 = _____

3. Without calculating, choose the expression that does not have the same value as 146 + 72.

A 140 + 70 + 8

B 140 + 60 + 10 + 8

C 140 + 60 + 8

Work on your own.

1. Show how to break up numbers to add and subtract.
   a) 65 + 57 = _____
   b) 78 + 49 = _____
   c) 54 – 28 = _____
2. Solve these problems.
   a) Alex had 81 marbles. He lost 56 marbles. How many marbles does he have left? _____
   b) Mary saved R73. Her father gives her R69 more. How much money does Mary have now? _____

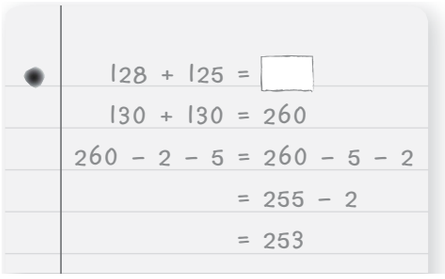
Share your solutions with the class.
Multiply your score by 2. Then record your score out of 10 on your Mental Maths grid.

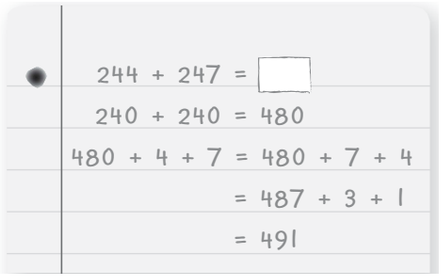
Activity 11 Use near doubles to add

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work with the class.

1. About how much is:
   a) double 128 _____
   b) double 296? _____
2. Zoe uses **near doubles** to add. Explore and explain her methods.





3. Aviwe achieved 99 marks in each of the two tests he wrote. How many marks did he score in the two tests altogether? _____

Work on your own.

1. Use near doubles to add the numbers.
   a) 56 + 58 = _____
   b) 113 + 119 = _____
   c) 88 + 87 = _____
2. Solve the word problems using near doubles.
   a) A goat weighs 39 kg. A sheep weighs twice as much. What is the mass of the sheep? _____
   b) What is double the sum of 47 + 45? _____

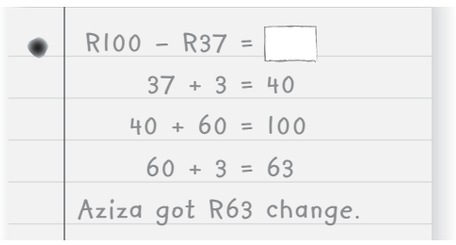
Share your solutions with the class.
Multiply your score by 2. Then record your score out of 10 on your Mental Maths grid.

Activity 12 Do addition to subtract

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Count on or add to subtract R37 from R100.

Work with the class.



1. Aziza bought a pen for R37. How much change did she get if she paid with a R100 note? Explore and discuss Aziza's strategy to calculate the change.
2. Show how to subtract 278 from 1 000 using addition.

_____

Work on your own.

1. Add or count on to calculate.
   a) R100 – R44 = _____
   b) 1 000 – 766 = _____
   c) 2 000 – 250 = _____
   d) 1 195 + _____ = 2 000
   e) 3 300 + _____ = 4 000
2. a) Kay buys a toy for R68,60. Circle the coins and notes she uses to pay for the toy.

R10,00	R50,00	R20,00	R5,00	R2,00
R1,00	50c	20c	10c	

   b) How much change will Kay get if she pays with R100? _____

Share your solutions with the class.
Question 2.a) is 4 marks. Record your score out of 10 on your Mental Maths grid.

Activity 13 Solve problems

Content Area 1: Numbers, operations and relationships
Topic 1.1: Addition and subtraction

Work on your own.

Solve these word problems.

1. A hawker has 165 apples. He sold some apples and has 96 apples left.
   a) Which calculation tells you how many apples the hawker has left?
   A 165 + 96 **B** 165 × 96
   C 165 – 96 **D** 165 ÷ 95
   b) Now solve the problem.

   _____
2. Zukiswa has 84 beads. She uses 58 beads to make a bracelet. How many beads does she have left?
   _____ beads

3. A farmer's chickens laid 68 eggs on Monday and 66 eggs on Tuesday. How many eggs did the chickens lay in two days?

   _____ eggs

4. Crispin buys a chocolate for R7,25. How much change does he get from R10,00?

   R_____

5. Kim has R157. Her sister has R139. How much money do they have altogether?

   R_____

Share your solutions with the class.
Multiply your score by 2. Then record your score out of 10 on your Mental Maths grid.

Activity 14 Complete and describe numeric patterns

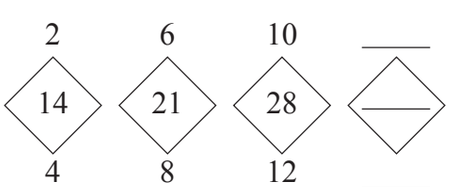
Content Area 2: Patterns, functions and algebra
Topic 2.1: Numeric patterns

Work with the class.

1. Find the missing number in each number pattern.
   - **a)** 700; 675; 650; 625; 600; _____
   - **b)** 800; 400; 200; _____; 50
   - **c)** 40; 32; 24; _____; 8; 0
   - **d)** 250; 260; 270; 280; 290; _____
   - **e)** 500; 1 000; 2 000; 4 000; _____
2. Describe each number pattern above.

Work on your own.

1. Write the next number in each pattern.
   - **a)** 90; 92; 94; 96; 98; _____
   - **b)** 75; 73; 71; _____
   - **c)** 100; 125; 150; 175; _____
   - **d)** 80; 40; 20; 10; _____
2. Fill the missing numbers in each pattern.
   - **a)** 746; 846; 946; _____
   - **b)** 16; 20; 24; _____; 32
   - **c)** 1 055; 2 055; 3 055; _____; 5 055
3. Fill in the missing numbers in the last diagram.



Share your solutions with the class.
Record your score out of 10 on your Mental Maths grid.