These workbooks have been developed for the children of South Africa under the leadership of the Minister of Basic Education, Mrs Angie Motshekga, and the Deputy Minister of Basic Education, Mr Enver Surty.

The Rainbow Workbooks form part of the Department of Basic Education’s range of interventions aimed at improving the performance of South African learners. As one of the priorities of the Government’s Plan of Action, this project has been made possible by the generous funding of the National Treasury. This has enabled the Department to make these workbooks available at no cost.

We hope that teachers will find these workbooks useful in their everyday teaching and in ensuring that their learners cover the curriculum. We have taken care to guide the teacher through each of the activities by the inclusion of icons that indicate what it is that the learner should do.

We sincerely hope that children will enjoy working through the book as they grow and learn, and that you, the teacher, will share their pleasure.

We wish you and your learners every success in using these workbooks.

Mrs Angie Motshekga,
Minister of Basic Education

Mr Enver Surty,
Deputy Minister of Basic Education

Revised and CAPS aligned

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<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Count, sort and show!</td>
<td>2</td>
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<td>Clever counting</td>
<td>4</td>
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<tr>
<td>3a</td>
<td>Numbers on a hundred board</td>
<td>b</td>
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<td>3b</td>
<td>Numbers on a hundred board (continued)</td>
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<td>Addition and subtraction</td>
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<td>Doubles and halves</td>
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<td>Sorting money</td>
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<td>Patterns</td>
<td>20</td>
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<tr>
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<td>22</td>
</tr>
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<td>Draw, name and compare 2D shapes</td>
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<td>14</td>
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<tr>
<td>15</td>
<td>Working with mass</td>
<td>32</td>
</tr>
<tr>
<td>1b</td>
<td>Data handling</td>
<td>34</td>
</tr>
<tr>
<td>17</td>
<td>Compare and order numbers</td>
<td>36</td>
</tr>
<tr>
<td>18</td>
<td>Place value to 99</td>
<td>38</td>
</tr>
<tr>
<td>19</td>
<td>Putting tens together when we add to 99</td>
<td>40</td>
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<tr>
<td>20a</td>
<td>Add on a number line</td>
<td>42</td>
</tr>
<tr>
<td>20b</td>
<td>Add on a number line (continued)</td>
<td>44</td>
</tr>
<tr>
<td>21a</td>
<td>Subtract on a number line</td>
<td>46</td>
</tr>
<tr>
<td>21b</td>
<td>Subtract on a number line (continued)</td>
<td>48</td>
</tr>
<tr>
<td>22</td>
<td>It's party time</td>
<td>50</td>
</tr>
<tr>
<td>23</td>
<td>Counting up to 200</td>
<td>52</td>
</tr>
<tr>
<td>24</td>
<td>Practice with 5s</td>
<td>54</td>
</tr>
<tr>
<td>25a</td>
<td>Count in 2s</td>
<td>56</td>
</tr>
<tr>
<td>25b</td>
<td>Count in 2s (continued)</td>
<td>58</td>
</tr>
<tr>
<td>26</td>
<td>Money and now</td>
<td>60</td>
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<tr>
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<td>Count in 3s</td>
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<td>28</td>
<td>What comes in 4s?</td>
<td>64</td>
</tr>
<tr>
<td>29</td>
<td>Patterns in numbers</td>
<td>66</td>
</tr>
<tr>
<td>30a</td>
<td>Division</td>
<td>68</td>
</tr>
<tr>
<td>30b</td>
<td>Division (continued)</td>
<td>70</td>
</tr>
<tr>
<td>31</td>
<td>Fractions</td>
<td>72</td>
</tr>
<tr>
<td>32</td>
<td>It's about time</td>
<td>74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Target, 200</td>
<td>76</td>
</tr>
<tr>
<td>34</td>
<td>Working with groups of numbers</td>
<td>78</td>
</tr>
<tr>
<td>35a</td>
<td>Putting tens together and taking them apart.</td>
<td>80</td>
</tr>
<tr>
<td>35b</td>
<td>Putting tens together and taking them apart (continued)</td>
<td>82</td>
</tr>
<tr>
<td>36</td>
<td>A visit to the dentist</td>
<td>84</td>
</tr>
<tr>
<td>37a</td>
<td>Add and combine</td>
<td>86</td>
</tr>
<tr>
<td>37b</td>
<td>Add and combine (continued)</td>
<td>88</td>
</tr>
<tr>
<td>38</td>
<td>Solve it!</td>
<td>90</td>
</tr>
<tr>
<td>39</td>
<td>Count and calculate</td>
<td>92</td>
</tr>
<tr>
<td>40</td>
<td>Measuring in centimetres</td>
<td>94</td>
</tr>
<tr>
<td>41</td>
<td>Target, 300</td>
<td>96</td>
</tr>
<tr>
<td>42</td>
<td>Adding and subtracting with 100s</td>
<td>98</td>
</tr>
<tr>
<td>43</td>
<td>Target, 200</td>
<td>100</td>
</tr>
<tr>
<td>44</td>
<td>Weighing in</td>
<td>102</td>
</tr>
<tr>
<td>45</td>
<td>Target, 500</td>
<td>104</td>
</tr>
<tr>
<td>46</td>
<td>More adding and subtracting</td>
<td>106</td>
</tr>
<tr>
<td>47</td>
<td>Sharpen your skills</td>
<td>108</td>
</tr>
<tr>
<td>48</td>
<td>Symmetry</td>
<td>110</td>
</tr>
<tr>
<td>49</td>
<td>Building up to 500</td>
<td>112</td>
</tr>
<tr>
<td>50</td>
<td>Multiplication and division (10)</td>
<td>114</td>
</tr>
<tr>
<td>51</td>
<td>Count in 2s</td>
<td>116</td>
</tr>
<tr>
<td>52</td>
<td>Plane with tiles</td>
<td>118</td>
</tr>
<tr>
<td>53</td>
<td>Using fives</td>
<td>120</td>
</tr>
<tr>
<td>54</td>
<td>Working with time</td>
<td>122</td>
</tr>
<tr>
<td>55</td>
<td>Count in 3s and 4s</td>
<td>124</td>
</tr>
<tr>
<td>56</td>
<td>Count in 50s</td>
<td>126</td>
</tr>
<tr>
<td>57</td>
<td>Fractions: halves and quarters</td>
<td>128</td>
</tr>
<tr>
<td>58</td>
<td>Fractions: thirds and sixths</td>
<td>130</td>
</tr>
<tr>
<td>59</td>
<td>Fractions: fifths</td>
<td>132</td>
</tr>
<tr>
<td>60</td>
<td>3D objects</td>
<td>134</td>
</tr>
<tr>
<td>61</td>
<td>Double and half</td>
<td>136</td>
</tr>
<tr>
<td>62</td>
<td>More double and halving</td>
<td>138</td>
</tr>
<tr>
<td>63</td>
<td>Group and combine</td>
<td>140</td>
</tr>
<tr>
<td>64</td>
<td>Maths fun</td>
<td>142</td>
</tr>
</tbody>
</table>

**Contents**

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>
This book belongs to:
Count, sort and show!

How many stars?

Estimate how many stars. ______

Now count them. ______

Find the winner!
Who made the best estimate?
Fill in your names and answers in this table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Estimate</th>
<th>Number counted</th>
<th>Difference between your estimate and your count</th>
</tr>
</thead>
</table>
Ways to count. Help us to write it down.

Write number sentences

Count the total number of big and small stars in the picture on page 2.
Write them in two ways.

Big  Small  like this  or  like this

\[
\begin{align*}
\text{Big} & \quad \text{Small} \\
\star & + \star = \_ & \star & + \star = \_
\end{align*}
\]

and as a number sentence.

\[
\begin{align*}
\_ & + \_ = \_ & \_ & + \_ = \_
\end{align*}
\]
Clever counting

Counting the pumpkins
Find an easy way to count them.

Packing the pumpkins
Ten pumpkins go in one bag.

How many bags can you fill with the pumpkins? _______________

How many pumpkins are left over? _______________

How many more pumpkins are needed to fill one more bag? _______________

Answer: _______________
From + to × (addition to multiplication)

Complete the number sentences.

Example:

\[10 + 10 + 10 + 10 = 40 \implies 4 \text{ groups of } 10 = 40 \implies 4 \times 10 = 40\]

a. \[10 + 10 + 10 = \text{_________}\]
   \[\text{_________ groups of } 10 = \text{_________} \implies \text{_________} \times \text{_________} = \text{_________}\]

b. \[10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = \text{_________}\]
   \[\text{_________ groups of } 10 = \text{_________} \implies \text{_________} \times \text{_________} = \text{_________}\]

Hands and fingers

How many hands? ______

How many fingers? ______

Write your answer in 2 ways.

\[\text{_____ groups of } 10 = \text{______ and } \text{_____} \times 10 = \text{______}\]
Numbers on a hundred board

Talking numbers
Count and say all the numbers from 1 to 100. Point as you go.

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</table>

a. Write the missing number in each blue block.
b. Write in the other numbers.
c. What kind of numbers are the yellow numbers?

Write the numbers in words.

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</tbody>
</table>
Counting and colouring

Get ready to count a colour!

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</tbody>
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Count and colour the 10s.

Count and colour the 5s from 0 to 100.

Count and colour the 2s.

Count in 10s from 10 to 100.

Count in 5s from 5 to 100.

Count in 2s from 2 to 100.

Write the 10s from 10 to 100.

Write the 5s from 5 to 80.

Write the 2s from 2 to 100.
Looking for patterns

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Tick (✓) all the 10s  Cross (X) the 5s  Circle (〇) the 2s

Write the numbers that are in both the 2s and the 5s pattern.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
### Counting patterns
Fill in the missing numbers.

| 0; 10; 20; _____; _____; 50; _____; _____; 80; _____; 100; _____; _____; 130; _____; _____; 160; _____; _____; _____; 200 |
| 0; 5; 10; _____; _____; 25; _____; _____; 40; _____; 50; 55; _____; _____; 70; _____; _____; 85; _____; _____; 100 |
| 0; 2; 4; 6; _____; _____; 12; _____; _____; 18; _____; 22; 24; _____; _____; 30; _____; _____; 36; 38; _____; _____; 46; _____;  |
| 0; _____; 8; _____; 16; 20; _____; 28; _____; 36; _____; _____; 52; _____; _____; 64; _____; 72; _____; 80 |
| 0; _____; 10; _____; 20; _____; 30; _____; 40; _____; _____; 55; 60; _____; 70; 75; _____; 85; _____; _____; 100 |
| 0; 3; _____; 9; _____; 15; 18; _____; 24; _____; _____; 33; _____; 39; _____; 45; _____; _____; 54; 57; _____; 63; _____; _____; 72; 75 |
Place value

Showing your numbers

Cut out the number cards from Cut-out sheet 1.
Use the cards to build these numbers.

19  43  69  54  35

Now do it yourself for these numbers using Cut-out 1.

54

35

69
Writing these numbers
We have done the first one for you.

<table>
<thead>
<tr>
<th></th>
<th>10 + 9</th>
<th>1 ten + 9 units</th>
<th>nineteen</th>
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<tbody>
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</table>

Write the first five numbers, in the table above, in order from smallest to biggest.

_____; _____; _____; _____; _____
Addition and subtraction

Lebo’s stall
In the morning Lebo has 19 packets of apples. By lunchtime she has 13 packets left.

a. How many packets does Lebo sell? _______

b. Write your answer as a number sentence.
_____ – _____ = ______

Write five other numbers sentences to show the same answer.
15 – 9 = 6 _______ _______ _______ _______ _______

Number drill
Write the answers.

<table>
<thead>
<tr>
<th>10 + 5 =</th>
<th>11 + 6 =</th>
<th>14 – 9 =</th>
<th>14 – 8 =</th>
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</table>

<table>
<thead>
<tr>
<th>11 + 5 =</th>
<th>17 + 2 =</th>
<th>19 – 7 =</th>
<th>14 – 5 =</th>
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<table>
<thead>
<tr>
<th>12 + 6 =</th>
<th>3 + 13 =</th>
<th>16 – 5 =</th>
<th>16 – 13 =</th>
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<th>17 + 2 =</th>
<th>4 + 15 =</th>
<th>15 – 10 =</th>
<th>19 – 7 =</th>
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Number families 5 9 14
Here are examples of this number family.

<table>
<thead>
<tr>
<th>9 + 5 = 14</th>
<th>5 + 9 = 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 – 9 = 5</td>
<td>14 – 5 = 9</td>
</tr>
</tbody>
</table>
Can you find all the number families of 14?

<table>
<thead>
<tr>
<th>1 + 13 = 14</th>
<th>13 + 1 = 14</th>
<th>14 - 1 = 13</th>
<th>14 - 13 = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 + 12 =</td>
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<tr>
<td>3 + 11 =</td>
<td></td>
<td></td>
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<tr>
<td>4 + 10 =</td>
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<td>5 + 9 =</td>
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<td>6 + 8 =</td>
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<tr>
<td>7 + 7 =</td>
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</table>

12

I am going to do the same with 12.

<table>
<thead>
<tr>
<th>1 + 11 = 12</th>
<th>2 + 10 = 12</th>
<th>3 + 9 = 12</th>
<th>4 + 8 = 12</th>
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</table>

12
Doubles and halves

Do you remember?
Double 2 is 4  Double 20 is 40  4 is double 2  40 is double 20

We can show this in a drawing ...

Finding doubles or halves

a. 8  4  24  24
b. 60  30  17  17
c. 50  33  33
d.
e.
f.

Challenge
Find one half of 3.
Show as a number or number name. A drawing might help you.
Double the number using a number line. The first example is given to you.

a. Double 4

\[
4 + 4 = 8
\]

b. Double 5

\[
\_
\]

c. Double 20

\[
\_
\]

d. Double 40

\[
\_
\]

Complete the following

a. Double 1

\[
2
\]

b. Double 6

c. Double 10

d. Double 30

e. Double 50

Complete the following

a. Half 6

\[
3
\]

b. Half 8

c. Half 14

d. Half 60

e. Half 70
Fractions

Colour one quarter of the balloons red and the rest blue.

Colour one half of each box red.

Look at the shapes. Tick the shapes that show halves.

Colour one half of each shape that is divided into halves.

Look at the shapes. Tick the shapes that show quarters.

Colour one quarter of each shape that is exactly divided into equal quarters.
Colour in a half of the shapes. What is a half of the number of the shapes?

Colour in a quarter of the shapes. What is a quarter of the number of the shapes?

Write as a fraction symbol.  

one half  

one quarter

Draw more shapes to make each half equal.

Draw more shapes to make each quarter equal.
Sorting money

At the stokvel
Ma Lubisi counts and sorts the money from the group.

Estimate the total amount.  R __________________________
Count the money.        R __________________________

Saving money

Gugu saves for a pair of shoes that costs R89.
So far she has half the amount.
How much more does she need?
Write a number sentence to show your answer.
At the bank

Maria sorts the notes into piles of 5. She also has some notes left over. Write the totals for each row of pictures.

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<th>Amount</th>
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<td>R______</td>
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Challenge

A visit to the zoo

Some adults and children go to the zoo. They buy tickets for R90.

How many are children? _____________
How many are adults? _______________
Is there another answer?
Adults ___________ Children ___________
Patterns

Use this 200 number board to answer the questions.

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</table>

Use the 200 number board to complete the next four numbers in these number patterns. Then colour the pattern on the number board.

- 105, 110, 115, _____, _____, _____
- 36, 40, 44, _____, _____, _____
- 70, 65, 60, _____, _____, _____
- 180, 176, 172, _____, _____, _____
- 87, 90, 93, _____, _____, _____
- 184, 186, 188, _____, _____, _____
- 138, 135, 132, _____, _____, _____
- 14, 12, 10, _____, _____, _____
Write the numbers that come next in each pattern. Then colour in the pattern. What do you notice about the numbers shaded with the same colour?

**Counting in fives.**

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<tbody>
<tr>
<td>5</td>
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</table>

**Counting in twos.**

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<td>2</td>
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</table>

**Counting in threes.**

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</table>

**Counting in tens.**

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<td>10</td>
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</table>

Extend the pattern.

- Red and blue circles:
  - [Diagram of circles]

- Purple triangles:
  - [Diagram of triangles]

- Pink line shapes:
  - [Diagram of line shapes]
Balls, boxes and cylinders

Circle the boxes in blue, the balls in red and the cylinders in green.

Colour the correct answer.

The box  
slides  rolls

The cylinder  
slides  rolls

The ball  
slides  rolls
Colour in the correct answer.

- curved edge
- straight edge

Say if the can is behind, in front of, next to or on top of the box.

- behind
- in front of
- next to
- on top of
Draw, name and compare 2D shapes

Draw the shapes.

Triangle

Square

Circle

Rectangle

Counting the shapes.

Count how many shapes like this you can find in the picture.
Colour all the

- big circles red, small circles green;
- big triangles blue, small triangles orange;
- big squares yellow, small squares purple;
- big rectangles brown, small rectangles pink.

How many sides?

How many sides does each shape have? Write the number in the block.

We have done one for you. Are the sides straight or curved? Colour in the correct answer.
Time passes

Reading the time
What times do these watches show?

- ______ o’clock
- ______ o’clock
- ______ o’clock
- ______ o’clock

Jump around the clock
Help Minnie Mouse count the minutes in 5s.
Start at the 12. Go all the way around.

How many minutes do you count? ________________
How many minutes in 1 hour? ________________

Writing the time
Draw the hands to show the times.

- quarter past 6
- half past 8
- quarter to 11
- half past 5
Zander walks to school.

He leaves home.

He gets to school.

How long does Zander take? _________________

Mandla takes 45 minutes to get to school. Zander takes twice as long.

How many hours does Zander take to get to school? _________________

Baking day

Maria bakes bread.

The bread goes into the oven.

The bread comes out.

The bread bakes for _________________ minutes.

Challenge

In double time

a. Change the hours to minutes.

<table>
<thead>
<tr>
<th>Hours</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes</td>
<td>60</td>
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</tbody>
</table>

b. Mandla takes 45 minutes to get to school. Zander takes twice as long. How many hours does Zander take to get to school?
Measuring length

Together, all the sides of this triangle are 3 pencils long.

Together, all the sides of this square are 4 pencils long.

I wonder how long and wide the rectangle is.

How many pencils long is the rectangle? 

How many pencils wide is the rectangle? 

How did you use the pencils to count?
Mystery lengths

a. How many of the red lines do you need to cover the black line?

b. How many of the red lines do you need to go all the way around the rectangle?

c. Which is longer, the top path or the lower one, or are they the same?

Answer: _______________________________________________________

Why? ________________________________________________________
Capacity

The measuring jug holds 10 cups of water. I have already put two cups into the measuring jug.

How many more cups of water will fill the container?

How many cups of water are in the container? How many cups more do we need to fill the container?

a. In the container: 1 Need more: 9
b. In the container: Need more:
c. In the container: Need more:
d. In the container: Need more:
e. In the container: Need more:
f. In the container: Need more:
Write the intervals on this measuring jug. We have shown interval 5.

If one cup fills the jug to the second interval, how many cups do you need to fill the jug to:

a. 4 _______
b. 6 _______
c. 8 _______
d. 10 _______

Tick which containers you think hold 1 litre of liquid.
Working with mass

Let’s measure how heavy we are!

To find out how heavy or light we are, we use a scale.

We use kilograms to measure how heavy we are.
We use this abbreviation: kg. Who weighs the most?

41 kg  38 kg  41 kg  42 kg  39 kg

We use a balance scale to measure mass.

On this scale both apples weigh the same.

On which scale is the green apple heavier than the red apple

On which scale is the green apple lighter than the red apple

Answer the question. Write a or b.
Balance the scales.
We did the first one for you.

If one parcel weighs 3 kg, how much will 2 and 3 parcels weigh?

a. 2 parcels ________ kg
b. 3 parcels ________ kg
c. Can I measure 4 parcels at the same time on this kitchen scale? ______
   Why or why not? __________________________________________
   _______________________________________________________
   _______________________________________________________

Tick in the answer blocks which objects weigh about 1 kg.
Data handling

Shoes in the class

Read the story.
Thabo: Wow, Miss! Jack is a giant! He wears size 6 shoes!
Mrs Khoza: Well! Yes, Thabo, that is big for a nine year old!
What size shoe do you wear Thabo? What sizes do the rest of the class wear?
Let’s do a survey!

The learners call out their sizes, one by one.

Mrs Khoza writes the sizes on the board.

Mrs Khoza: Count, then write how many of each size.

Fill in the table below.

<table>
<thead>
<tr>
<th>Size 1</th>
<th>Size 2</th>
<th>Size 3</th>
<th>Size 4</th>
<th>Size 5</th>
<th>Size 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Now answer these questions.

a. Most learners wear shoe size ____________.

b. The fewest number wear size ____________.

c. ____________ children took part in this survey.

What about you?

Find out what shoe sizes you and your friends wear!

• Work in a group of 6 to 8.
• Collect your data.
• Write the number of shoe sizes in a table.
• Compare answers with other groups.
Compare and order numbers

<table>
<thead>
<tr>
<th>75</th>
<th>76</th>
<th>77</th>
<th>78</th>
<th>79</th>
<th>80</th>
<th>81</th>
<th>82</th>
<th>83</th>
<th>84</th>
<th>85</th>
<th>86</th>
<th>87</th>
<th>88</th>
<th>89</th>
<th>90</th>
<th>91</th>
<th>92</th>
<th>93</th>
<th>94</th>
<th>95</th>
<th>96</th>
<th>97</th>
<th>98</th>
<th>99</th>
</tr>
</thead>
</table>

What number is before 84? ________
What number is after 84? ________

What number is between 88 and 90? ________

Fill in the missing numbers.

51 __________

71 __________

67 __________

100 __________

Use the number board to answer the questions.

• Which number is before 68? ________
• Which number is after 68? ________
• Write down five numbers smaller than 71. ________, ________, ________, ________, ________
• Write down five numbers bigger than 71. ________, ________, ________, ________, ________
• What numbers are between 79 and 84? ________
• Write the numbers from the smallest to largest. 73, 52, 50, 59, 61 ________
• Write the numbers from the largest to smallest. 74, 96, 99, 91, 38 ________
Complete the table. Start with the given number.

<table>
<thead>
<tr>
<th></th>
<th>one more</th>
<th>one less</th>
<th>ten more</th>
<th>ten less</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circle the biggest number.

78  87  17  36  63  33

Circle the smallest number.

99  19  9  14  41  40

If < means smaller than, and > means bigger than, complete:

32 < 64  23 > 18

57  98  89  57

Find 5 numbers in a newspaper between 50 and 99 and paste them in order from the smallest to the biggest.
Place value to 99

Showing numbers using objects

We can show numbers with place value blocks.

A small block stands for a 1. It is a unit.

A rod of 10 small blocks stands for a 10. It is a ten.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You can show a number using tens and units.

Here is how to show 47.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

forty-seven

47

Writing numbers in digits and words

a. Under the picture, write how many tens and how many units. Then write the number in symbols and words.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

31
thirty-one

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b. We can also use our number cards to show it.

<table>
<thead>
<tr>
<th>Number</th>
<th>How many tens?</th>
<th>How many units?</th>
<th>Write the number in words</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>2</td>
<td>6</td>
<td>twenty-six</td>
</tr>
<tr>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the number?

<table>
<thead>
<tr>
<th>Number</th>
<th>Tens</th>
<th>Units</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>thirty-five</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Putting tens together when we add to 99

Here is one way to show 22.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12 units</td>
</tr>
</tbody>
</table>

We have 1 ten 12 units.

Now we have another way to show 22.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2 units</td>
</tr>
</tbody>
</table>

We have 2 tens 2 units.

We will put 10 of the units in a group.

Let's add 27 + 4. The blue blocks are the units we start with and the red units are the units we are adding to them.

27 is 2 tens and 7 units.
Then we add 4 more units.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7 units</td>
</tr>
<tr>
<td></td>
<td>+ 4 units</td>
</tr>
</tbody>
</table>

2 tens 7 units + 4 units

We have 2 tens and 11 units.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>11 units</td>
</tr>
</tbody>
</table>

We can show 10 units as 1 ten.

Now we have 3 tens + 1 unit = 31

<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

20 7 4

20 1

3 1

+ + = ___
Write the number sentence shown by the picture.

```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

10 + 5 + 6

```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
```

___ + ___ + ___

```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

___ + ___ = ____

Complete the pictures. Write the number sentences shown by the picture.

```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tbody>
</table>
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```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
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<tbody>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>
```

```
Add on a number line

Sit at your desk!

In our school each learner has their own desk. There are 46 learners in Grade 3A and 24 in Grade 3B. How many desks do we need for both classes?

Working with a partner

Look at how these three learners used a number line to solve the problem. Complete the sums using the example.

This is what I do: I first add 10. This brings me to 56. Then I jump another 10 to get to 66. And lastly, I jump 4 more to land at 70.

\[
46 + 10 + 10 + 4 = 56 + 10 + 4 = 66 + 4 = 70
\]

a. \(32 + 25 = \)
b. 52 + 26 =

This is what I do: First I will jump 4. That will bring me to 50. I can jump 20 more, which brings me to 70.

= 40 + 10 + 20
= 50 + 20
= 70

a. 36 + 41 =

Teacher:
Sign:
Date:

---

I must add 24 to 46.
Add on a number line (continued)

b. 57 + 19 =

This is what I do: From 46, I can jump 20. That brings me to 66. Now I have to jump 4 more and then I reach 70.

= 46 + 20 + 4
= 66 + 4
= 70

a. 63 + 24 =

b. 65 + 29 =
How many loaves?

The baker delivers 54 brown and 68 white loaves.

a. How many loaves altogether?

b. Find the total on a number line. Show the numbers and the size of the jumps.

Add the following without using a number line. Use any other method you like.

\[
\begin{align*}
38 + 24 &= \\
58 + 17 &= \\
75 + 16 &= \\
83 + 29 &= 
\end{align*}
\]
Subtract on a number line

One learner! One ruler!

The class needs 53 rulers. We have only 35.

How many more do we need? $53 - 35 = \boxed{23}$

Working with a partner

Read how the same three learners use a number line here. Complete the sums using the example.

So, I will start at 53 and take away. I’ll take away 10, 10, 10 – that brings me to 23. Now to take away five. First I take away 3, and I come to 20. I take away 2 more and I get to 18. So we need 18 rulers.

$= 53 - 10 - 10 - 10 - 3 - 2$
$= 43 - 10 - 10 - 3 - 2$
$= 33 - 10 - 3 - 2$
$= 23 - 3 - 2$
$= 20 - 2$
$= 18$
Teacher:
Sign:
Date:

I’ll start at 53 and count down to 35 to find the difference. If I count back by 10, I get to 43. I can count back 3 more to get to 40. Then I count down 5 more to get to 35. 10 plus 3 plus five is 18. So we need 18 more rulers.

a. 38 \(-\) 14 = 

b. 74 \(-\) 38 = 

c. 92 \(-\) 87 = 

Subtraction means to find the difference between 53 and 35.

a. 68 \(-\) 24 = 
I can start at 35 and see how many jumps it takes me to count up to 53. Ten plus five plus three is 18. We need 18 more rulers.

a. $84 - 32 =$ 

b. $65 - 43 =$ 

c. $72 - 39 =$ 
d. $85 - 48 =$
Going by taxi

The journey by taxi to town is 65 km.
So far the taxi has travelled 38 km.
How much further to go?
Use the number line to solve this problem.
It’s party time

First plan!
Busi asks all of her friends to give her a picture of their favourite party food. This is what she has collected. Help to sort it.

Count, and write how many friends choose each Kind of food.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Number
Complete the pictograph. Use your table to help you. Draw one face (😊) for each child that chooses that kind of food or drink.

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</tbody>
</table>

Teacher: [Sign: ]
Date: [ ]
Counting up to 200

Count the apples.

Fill in the numbers.
1 Box has ______ apples
1 Row has ______ apples
1 Row has ______ boxes
4 Rows has ______ apples

How many apples can we pack in these boxes?

a. 
b. 
c. 

Count on the number line.

a. How many apples will there be in five boxes?

b. How many apples will there be in seven boxes?
3 lots of 10 make 3 0 3 × 10 = 3 0 or 10 × 3 = 3 0

5 lots of 10 make 5 × ____ = ____ or ____ × ____ =

2 lots of 10 make 2 × ____ = ____ or ____ × ____ =

5 Pairs of feet.
How many toes altogether?

10 + 10 + 10 + 10 + 10 = 5 0

10 × 5 =

Do these in the same way.

4 Pairs of feet. How many toes?

_______ = ____ × ____ = ____ or ____ × ____ =

9 Pairs of feet. How many toes?

_______ = ____ × ____ = ____ or ____ × ____ =

Count in 10s.

10, 20, 30, 40, 50, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____, 200
Practice with 5s

How many fish? Make an estimate

Now count the fish. Find the total.

Counting in 5s

Find the total number of fish eggs. Write a + and × number sentence. We have done the first one for you.

<table>
<thead>
<tr>
<th>Fish and eggs</th>
<th>How many eggs altogether?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 fish, each lay 2 eggs</td>
<td>2 + 2 + 2 + 2 + 2 = 10</td>
</tr>
<tr>
<td>5 fish, each lay 10 eggs</td>
<td>5 × 2 = 10</td>
</tr>
<tr>
<td>5 fish, each lay 4 eggs</td>
<td></td>
</tr>
<tr>
<td>5 fish, each lay 3 eggs</td>
<td></td>
</tr>
<tr>
<td>5 fish, each lay 6 eggs</td>
<td></td>
</tr>
<tr>
<td>5 fish, each lay 8 eggs</td>
<td></td>
</tr>
<tr>
<td>5 fish, each lay 5 eggs</td>
<td></td>
</tr>
</tbody>
</table>
Complete the number sentences and number lines.

\[ 5 + 5 + 5 + 5 + 5 + 5 + 5 = 35 \quad \text{or} \quad 7 \times 5 = 35 \]

a. \[ 5 + 5 + 5 + 5 = \quad \text{or} \quad \quad \quad \text{or} \]

b. \[ 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = \quad \text{or} \quad \quad \quad \text{or} \]

c. \[ \_ + \_ + \_ + \_ + \_ + \_ + \_ + \_ + \_ = \quad \text{or} \quad 10 \times 5 = 50 \]

Catching fish

Sipho catches between 40 and 50 fish. He counts them in 2s and has 1 left over.
He counts them in 5s and has 2 left over. How many fish does Sipho catch?
Count in 2s

Counting the socks

a. How many pairs of socks? _________________
b. How many socks are there? _________________
c. Are there any socks left over? _________________
Counting pairs of socks

Write how many pairs of socks there are and say if there are any left over.

<table>
<thead>
<tr>
<th>Socks</th>
<th>Number of pairs</th>
<th>Number of socks</th>
<th>Single socks left over</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Sock Image 1" /></td>
<td><img src="image2" alt="Number of Pairs Image 1" /></td>
<td><img src="image3" alt="Number of Socks Image 1" /></td>
<td><img src="image4" alt="Single Socks Image 1" /></td>
</tr>
<tr>
<td><img src="image5" alt="Sock Image 2" /></td>
<td><img src="image6" alt="Number of Pairs Image 2" /></td>
<td><img src="image7" alt="Number of Socks Image 2" /></td>
<td><img src="image8" alt="Single Socks Image 2" /></td>
</tr>
<tr>
<td><img src="image9" alt="Sock Image 3" /></td>
<td><img src="image10" alt="Number of Pairs Image 3" /></td>
<td><img src="image11" alt="Number of Socks Image 3" /></td>
<td><img src="image12" alt="Single Socks Image 3" /></td>
</tr>
<tr>
<td><img src="image13" alt="Sock Image 4" /></td>
<td><img src="image14" alt="Number of Pairs Image 4" /></td>
<td><img src="image15" alt="Number of Socks Image 4" /></td>
<td><img src="image16" alt="Single Socks Image 4" /></td>
</tr>
<tr>
<td><img src="image17" alt="Sock Image 5" /></td>
<td><img src="image18" alt="Number of Pairs Image 5" /></td>
<td><img src="image19" alt="Number of Socks Image 5" /></td>
<td><img src="image20" alt="Single Socks Image 5" /></td>
</tr>
</tbody>
</table>
Count in 2s (continued)

Building pairs
Write down the even and odd numbers from 1 – 60.

a. Write down the even numbers from 1 – 60.
2, 4, 6,

____________________________________________________________
____________________________________________________________
____________________________________________________________

b. Write down the odd numbers from 1 – 60.
3, 5, 7,

____________________________________________________________

Odds and evens
Draw a circle around the even numbers.
Draw a square around the odd numbers.
From pairs to socks

Example:

2 socks = 1 pair
2 × 1 = 2
20 socks = 10 pairs
2 × 10 = 20

a. Write how many socks.

<table>
<thead>
<tr>
<th>Think in 2s</th>
<th>Number sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pair</td>
<td>1 × 2 = 2</td>
</tr>
<tr>
<td>2 pairs</td>
<td>2 × 2 =</td>
</tr>
<tr>
<td>4 pairs</td>
<td>2 × 2 =</td>
</tr>
<tr>
<td>8 pairs</td>
<td>2 × 2 =</td>
</tr>
<tr>
<td>9 pairs</td>
<td>2 × 2 =</td>
</tr>
</tbody>
</table>

b. Show the sum on the number line and complete.

Example:

2 + 2 + 2 = 6 or 3 × 2 = 6

2 + 2 + 2 + 2 + 2 + 2 + 2 = or × =
Money then and now

The story of our money

In South Africa we use rands and cents as our money. We started to use rands and cents in 1961.

In those days the 1 cent coin had the lowest value, then the 2 cent coin and then the 5 cent coin.

I used these small coins to pay for a lot of things. Things were so cheap then!

Yes, you’re right, they are no longer being made!

But, Gogo, I have not seen 1 and 2 cent coins.

About 50 years ago we still used pounds, shillings and pence.

Yes, I remember! 1 pound was 20 shillings, and 1 shilling was 12 pence.
Count the cents

Count the 1 cents.
How many cents are there?

How many more cents do you need to make R1,00?

Draw them in the block.

How many cents?

<table>
<thead>
<tr>
<th>R1,00 =</th>
<th>c</th>
<th>R2,00 =</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3,00 =</td>
<td>c</td>
<td>R1,50  =</td>
<td>c</td>
</tr>
</tbody>
</table>

How much fruit can I buy?

2 cost R4,00.
How many bananas for R20,00?

2 cost R2,00.
How many apples for R9,00?
Count in 3s

Wheels in 3s

1 tricycle has ________ wheels.

| 5 tricycles have ______ wheels. | 3 + 3 + 3 + 3 + 3 = 5 × 3 = ______ |
| 2 tricycles have ______ wheels. | 3 + 3 = 2 × 3 = ______ |
| 4 tricycles have ______ wheels. | |
| 6 tricycles have ______ wheels. | |
| 9 tricycles have ______ wheels. | |
| 8 tricycles have ______ wheels. | |

Number lines

Follow the example.

a. 3 + 3 + 3 + 3 = ______ = 4 × 3 = ______
At the cycle shop Busi counts bicycle and tricycle wheels. There are 14 wheels altogether.

Bicycles and tricycles

How many bicycles are there? _________
How many tricycles are there? _________

b. \[3 + 3 + 3 + 3 + 3 = \square \times \square = \square\]

c. \[\quad = \square = 6 \times 3 = \square\]

d. \[\quad = \square = 10 \times 3 = \square\]
What comes in 4s?

Four legs

Cows have four legs.

What else comes in fours? ___________________________________________

Counting the legs

Use the facts you know about 4s to answer these questions.

<table>
<thead>
<tr>
<th>1 cow</th>
<th>4</th>
<th>legs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 cows</td>
<td>8</td>
<td>legs</td>
</tr>
<tr>
<td>3 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>4 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>5 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>6 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>7 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>8 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>9 cows</td>
<td></td>
<td>legs</td>
</tr>
<tr>
<td>10 cows</td>
<td></td>
<td>legs</td>
</tr>
</tbody>
</table>

Some 4 number facts …

\[ 4 + 4 = 8 \]
\[ 2 \times 4 = 8 \]
Complete the table below. Use the example to guide you.

<table>
<thead>
<tr>
<th>Number of Cows</th>
<th>Legs</th>
<th>Multiplication</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>___________</td>
<td>4 + 4 + 4 = 3 × 4</td>
<td><em><strong>12</strong></em>_</td>
</tr>
<tr>
<td>5</td>
<td>___________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>___________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>___________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>___________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Number lines**

Show the multiplication sum on the number line and complete using jumps (hops).

**a.**

\[
\_
\_
\_
\_ = \_
\_ = 5 \times 4 = \_
\_
\]

**b.**

\[
\_
\_
\_
\_ = \_
\_ = 9 \times 4 = \_
\_
\]
Grid patterns

Which number pattern do the circles in each 100 grid show?

Draw more circles to complete each pattern.

Write a name for each pattern.

a. Pattern: _________________

b. Pattern: _________________

c. Pattern: _________________

d. Pattern: _________________
Making your own patterns

a. In this number pattern all the numbers are even. What can the other numbers be? Write them in.

b. In this number pattern the numbers are all odd. What can the other numbers be? Write them in.

Where do they belong?

The 3s and 4s pattern | The 3s and 5s pattern | The 4s and 5s pattern
---|---|---
e.g. 48

At the sea

Thembi collects between 60 and 70 sea shells. When she counts them in 3s, she has 1 left over. The possible numbers are: 61, _____, _____, 70. When she counts them in 5s, she has 4 left over. The possible numbers are: _____, ____. How many shells does Thembi have? _____.
Share the sweets:

a. Share 30 sweets between 2 children.

We can write it as $30 \div 2 = 15$

b. Share the sweets among 3 children.

c. Divide the sweets between 5 children.
We can use number blocks to do division.

\[
\begin{align*}
\text{a. } & \quad 2 \quad 8 \div 2 = 1 \quad 4 \\
\text{b. } & \quad \underline{\text{}} \quad \underline{\text{}} \div 4 = \underline{\text{}} \quad \underline{\text{}}
\end{align*}
\]
Use the number lines to write a subtraction and division number sentence.

Example:

\[ 16 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 = 0 \]
\[ 16 \div 2 = 8 \]

a.

\[ 21 - \quad \quad \quad = \]
\[ \boxed{21} \div \boxed{2} = \]

b.

\[ 28 - \quad \quad \quad = \]
\[ \boxed{28} \div \boxed{} = \]

c.

\[ \quad \quad \quad = \]
\[ \boxed{} \div \boxed{} = \]
Draw a number line and solve the number sentences.

a. \(30 \div 5 = \)

b. \(22 \div 2 = \)

c. \(27 \div 3 = \)

d. \(32 \div 4 = \)

e. \(25 \div 5 = \)

Challenge
Show all the ways you can divide 24 sweets equally between different groups of children.

Write a number sentence to show your answer.
Fractions

Draw lines to match the shape with the fraction:

- One third \( \frac{1}{3} \)
- One fifth \( \frac{1}{5} \)
- One quarter \( \frac{1}{4} \)
- One half \( \frac{1}{2} \)
- Three quarters \( \frac{3}{4} \)
- Four fifths \( \frac{4}{5} \)
- One whole \( 1 \)
- Two thirds \( \frac{2}{3} \)

Divide and then colour the shape to show the fraction:

- One half \( \frac{1}{2} \)
- One third \( \frac{1}{3} \)
- One quarter \( \frac{1}{4} \)
- One fifth \( \frac{1}{5} \)

Show the fraction by drawing a line around the correct number of sweets:

- One half
- One third
- One quarter
- One fifth
Share the counters between the two children.

- We got 2 counters each.
- Half of 4 counters is 2.

\[4 \div 2 = 2\]

\[\text{___} \div \text{___} = \text{___}\]

\[\text{___} \div \text{___} = \text{___}\]

\[\text{___} \div \text{___} = \text{___}\]

Share the sweets between the children.

- one quarter of the sweets = 3
- two quarters of the sweets = ___
- three quarters of the sweets = ___
- four quarters of the sweets = ___

- one third of the sweets = ___
- two thirds of the sweets = ___
- three thirds of the sweets = ___
It’s about time

Clockwise

We can write the same time in different ways.

<table>
<thead>
<tr>
<th>Time</th>
<th>Clock 1</th>
<th>Clock 2</th>
<th>Clock 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:15</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>quarter past two</td>
<td>![Clock 1](quarter past two)</td>
<td>![Clock 2](quarter past two)</td>
<td>![Clock 3](quarter past two)</td>
</tr>
<tr>
<td>5:30</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>half past five</td>
<td>![Clock 1](half past five)</td>
<td>![Clock 2](half past five)</td>
<td>![Clock 3](half past five)</td>
</tr>
<tr>
<td>9:45</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>quarter to ten</td>
<td>![Clock 1](quarter to ten)</td>
<td>![Clock 2](quarter to ten)</td>
<td>![Clock 3](quarter to ten)</td>
</tr>
</tbody>
</table>

Write these times in 2 different ways.

<table>
<thead>
<tr>
<th>Time</th>
<th>Clock 1</th>
<th>Clock 2</th>
<th>Clock 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>6:00</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>9:00</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
<tr>
<td>12:00</td>
<td><img src="" alt="Clock 1" /></td>
<td><img src="" alt="Clock 2" /></td>
<td><img src="" alt="Clock 3" /></td>
</tr>
</tbody>
</table>

Write these times in 2 different ways.
Going home
How long does Ben take to get home?

- minutes
- hours

Ben leaves school. Ben gets home.

Time flies
Time in 2s ...

How many ...
- minutes in 2 hours? ________________
- hours in 2 days? ________________
- days in 2 weeks? ________________
- months in 2 years? ________________

How many days?

April 27 is Freedom Day.
June 16 is Youth Day.

a. From Freedom Day to Youth Day there is ________________ months,
   ________________ whole weeks and ________________ days.

b. How many whole weeks in all? ________________
   How many days left over? ________________ How many days in all? ________________.

c. Lebo’s birthday is 7 days before Freedom Day.
   Musa’s birthday is two days after Youth Day.
   Who is older? ________________ By how many days? ________________
Target 200

Counting the numbers

Count and say all the numbers from 101 to 200.
Point as you go.

<p>| | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>121</td>
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</tr>
<tr>
<td>131</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>149</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>154</td>
<td></td>
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<tr>
<td>165</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>173</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>186</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Writing the numbers

a. Write the missing number in each blue square.

b. Write in the rest of the numbers.

c. Write the next 10 numbers after 200.

200:____:____:____:____:____:____:____:____:____:____
Write the missing numbers

a. 200 180 __ __

b. __ __ 87 107

Complete

200 + 30 + 5 = 235
200 + 40 + 7 = __
200 + 60 + 8 = __

+ + = 293
+ + = 256

Write the numbers in order from smallest to biggest.

Counting on from 100

Work out what you need to get to the next number.

Start

End

100 +25 125 129 138
168 157 151 145
Working with groups of numbers

Packing candles

Ma Nkosi works at a candle factory. When the candles are ready, she packs them out like this in boxes on racks.

How many candles in each box? ______________________
How many boxes on each rack? ______________________
How many candles on each rack? _____________________
**Boxes of candles**

Ma Nkosi closes the boxes.

![Image of boxes]

a. Count all the boxes.

<table>
<thead>
<tr>
<th>How many boxes?</th>
<th></th>
<th>How many more boxes does she need to fill to have 200 candles?</th>
</tr>
</thead>
<tbody>
<tr>
<td>________ boxes</td>
<td></td>
<td>________ boxes</td>
</tr>
</tbody>
</table>

b. How many candles in:

<table>
<thead>
<tr>
<th>2 boxes?</th>
<th>4 boxes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>_________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5 boxes?</th>
<th>3 boxes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>_________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6 boxes?</th>
<th>7 boxes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>_________</td>
</tr>
</tbody>
</table>

c. How many boxes does she need for:

<table>
<thead>
<tr>
<th>40 boxes</th>
<th>70 boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>_________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>50 boxes</th>
<th>30 boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>_________</td>
</tr>
</tbody>
</table>
Putting tens together and taking them apart

Putting tens together when we add.

<table>
<thead>
<tr>
<th>100s</th>
<th>10s</th>
<th>1s</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Tens" /></td>
<td><img src="image2.png" alt="Units" /></td>
<td><img src="image3.png" alt="Units" /></td>
</tr>
</tbody>
</table>

Let's add $56 + 73 = \boxed{5 \text{ tens and } 6 \text{ units}} + \boxed{7 \text{ tens and } 3 \text{ units}}$

Together we have 12 tens. We can put 10 tens together to make 1 hundred.
Let us try.

Example: $82 + 34$

\[ \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} = \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \quad \text{and} \quad \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} = \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \]

\[\begin{array}{c}
\text{\ldots} \\
\text{\ldots} \\
\text{\ldots}
\end{array} \quad \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \]

\[100 + 20 + 6 = 126\]

a. $65 + 52$

\[\begin{array}{c}
\text{\ldots} \\
\text{\ldots} \\
\text{\ldots}
\end{array} \quad \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \]

b. $76 + 63$

\[\begin{array}{c}
\text{\ldots} \\
\text{\ldots} \\
\text{\ldots}
\end{array} \quad \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \]

c. $86 + 65$

\[\begin{array}{c}
\text{\ldots} \\
\text{\ldots} \\
\text{\ldots}
\end{array} \quad \begin{array}{c}
\text{\ldots} \\
\text{\ldots}
\end{array} \]
Putting tens together and taking them apart (continued)

Use your place value blocks.

<table>
<thead>
<tr>
<th>Use base ten blocks to make these two numbers.</th>
<th>All together how many tens? how many units?</th>
<th>Did you group tens or units? Check the place value where you regrouped.</th>
<th>Write the number.</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 + 99 =</td>
<td>_____ tens _____ units</td>
<td>11 tens + 12 units = 110 + 12</td>
<td>122</td>
</tr>
<tr>
<td>38 + 25 =</td>
<td>_____ tens _____ units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77 + 31 =</td>
<td>_____ tens _____ units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68 + 45 =</td>
<td>_____ tens _____ units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83 + 47 =</td>
<td>_____ tens _____ units</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Taking tens apart when we subtract

When we subtract, we sometimes need to show one ten as ten units, or one hundred as 10 tens.

Let’s subtract: \[60 - 55 = \]

We start with six tens and no units. We want to subtract five tens and five units. (The units we are taking away we coloured grey.)

<table>
<thead>
<tr>
<th>We can show six tens like this.</th>
<th>Or as five tens and ten units.</th>
<th>Take away five tens and five units. Five units are left.</th>
</tr>
</thead>
</table>

\[60 - 55 = 5\]
Let us try.

a. \(70 - 28\)

\[
\begin{array}{c|c|c}
7 \text{ tens} & 6 \text{ tens and 10 units} & 70 - 28 = \\
\hline
\end{array}
\]

b. \(90 - 46\)

c. \(80 - 53\)

Finding the number pair

a. \[
\begin{array}{c}
200 \\
30 \\
\end{array}
\]

b. \[
\begin{array}{c}
200 \\
70 \\
\end{array}
\]

c. \[
\begin{array}{c}
200 \\
105 \\
\end{array}
\]

d. \[
\begin{array}{c}
200 \\
85 \\
\end{array}
\]
A visit to the dentist

A group of children visit the dentist.

This is what the children tell him. = 1 time

<table>
<thead>
<tr>
<th>Once a day</th>
<th>Twice a day</th>
<th>Three times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️</td>
<td>✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️ ✔️</td>
<td>✔️ ✔️ ✔️ ✔️</td>
</tr>
</tbody>
</table>

a. Count the ticks (√) showing how often children brush their teeth. Write the numbers.

b. What can you see from the table?

Most of the children brush ____________________ a day.

There are ____________________ children in the group.
Draw a pictograph of how many times a day the children brush their teeth.

= 1 time

Do a survey in your class. Ask 15–20 learners.

a. How many times a day they brush their teeth? _________________

b. Draw a pictograph like the one above to show your findings.
Add and combine

Writing out your sum

Busi can add units and tens and regroup them. She can add and subtract on paper, without blocks. Sometimes she likes to start with her number cards to show the numbers.

So for the sum $56 + 73$, she finds these cards:

```
5 0 6
+ 7 0 3
```

She adds the units and puts down the 9 card.

She knows: $50 + 70 = 120$.

She takes the hundreds, the 20 and the 9 card to make a 3-digit number.

She writes it out like this:

$50 + 70 + 6 + 3 = 50 + 70 + 9$
$= 120 + 9$
$= 100 + 20 + 9$
$= 129$

Dumi knows how the blocks work.

She does $56 + 73$ like this:

$\frac{50 + 6 + 70 + 3}{120 + 9}$
$= 129$

Aakar likes to round off.

Here’s how he does this one:

$56 + 73$
$= 50 + 70 + 10 - 1$
$= 130 - 1 = 129$
Now try for yourself. Do each one in two ways.

a. \(86 + 62\)

Busi’s method
\[80 + 60 + 6 + 2\]

Dumi’s method
\[80 + 6 + 60 + 2\]

b. \(72 + 63\)

c. \(81 + 57\)

d. \(69 + 71\)

Use Aakar’s method to do this one.
Add and combine (continued)

Now let's subtract.

a. $87 - 53$

Busi's method

$80 - 50 + 7 - 3$

$= 30 + 4$

$= 34$

Dumi's method

$80 + 7 - 50 + 3$

$= 30 + 4$

$= 34$

b. $95 - 73$

c. $86 - 62$

d. $85 - 69$
Solve it!

There are many ways to add units and tens together. Choose the way you know and like best to solve these problems. Show your work.

a. Peter first picks 34 peaches and then 67 peaches.
   How many peaches altogether?

b. The Malusi kids save R47 together.
   Their mother gives them another R58. How much do they have now?

c. The school bus travels 88 km in the morning and 73 km in the afternoon.
   How many km altogether?
Solve it!

Bottle tops

Sipho counts out 87 bottle tops. Andile counts out 38.
How many more bottle tops does Sipho count than Andile?

The school concert

Musa sells tickets. He had 92 tickets to begin with. He has 67 left.
How many tickets has Musa sold so far?
More practice

There are 69 chickens in one pen and 95 in another. How many chickens are there altogether? Read how Gugu and Aakar solve the problem.

Gugu’s way

\[
60 + 90 + 9 + 5 \\
= 100 + 50 + 14 \\
= 150 + 10 + 4 \\
= 164
\]

Aakar’s way

\[
69 + 95 \\
= 70 + 95 - 1 \\
= 70 + 90 + 5 - 1 \\
= 160 + 4 \\
= 164
\]

I subtracted 1. Do you know why?

a. The boys collect R96 for a class trip. The girls collect R79. How much do they collect altogether?

Use Gugu’s way

Use Aakar’s way

b. One school collects 76 kg of cans. Another school collects 68 kg cans. How many kg of cans do the two schools collect altogether?

Use Gugu’s way

Use Aakar’s way
Count and calculate

Finding the part
Write in the missing numbers.

a. 100  
   27  

b. 100  
   39  

c. 100  
   43  

d. 100  
   56  

e. 200  
   140  

f. 200  
   110  

g. 200  
   135  

h. 200  
   120  

Subtracting back from 220 to 100
Subtract the numbers in the pink box each time.
We have done the first one for you.

220 \(\rightarrow \) -15 \(\rightarrow \) 205 \(\rightarrow \) -5 \(\rightarrow \) 200 \(\rightarrow \) -10 \(\rightarrow \) 190 \(\rightarrow \) -20 \(\rightarrow \) 170

Here is a way to check your answers.
Start at 100, Work back to 220.
But this time, add the numbers.
Families of three
Find 3 numbers that add up to the target number.
Rule: Only one number can end in 0.

Example:

50 more and 50 less
Write the answers in the 2nd row.

<table>
<thead>
<tr>
<th>+50</th>
<th>70</th>
<th>125</th>
<th>150</th>
<th>81</th>
<th>96</th>
<th>122</th>
<th>134</th>
<th>111</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>-50</th>
<th>186</th>
<th>200</th>
<th>158</th>
<th>179</th>
<th>139</th>
<th>79</th>
<th>126</th>
<th>138</th>
<th>99</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>136</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Measuring in centimetres

How big is a centimetre?

The numbers on the ruler stand for centimetres. We use the abbreviation or symbol cm. When you use a ruler, you must start to measure from 0. Some rulers do not show the 0 like the one on this page. Find zero cm on the ruler. Write 0 on the ruler. Where is 10 cm on this ruler? Write 10 there.

Estimate, then measure accurately with your ruler, the length in cm of the line making each shape.
How long is each line?

How many cm long is each line?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>cm</th>
<th></th>
<th></th>
<th>cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td></td>
<td>d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td></td>
<td></td>
<td>e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td></td>
<td></td>
<td>f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are you sure?

Which is longer, the red line or the green line?

How can you check?

This is what is called an optical illusion. This happens when your eyes are tricked into seeing something that is not really there. The two lines are the same length. The black lines extending outward make the red line look longer and the black lines going inwards make the green line look shorter.
Target 300

Counting and writing the 200s

Count from 201 to 300.
Point as you go.
Then fill in the blue numbers first.
Write in the rest of the numbers.

<table>
<thead>
<tr>
<th>201</th>
<th></th>
<th>207</th>
<th></th>
<th>210</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>221</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>231</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>254</td>
<td></td>
<td>249</td>
</tr>
<tr>
<td></td>
<td></td>
<td>265</td>
<td></td>
<td></td>
</tr>
<tr>
<td>273</td>
<td></td>
<td></td>
<td></td>
<td>280</td>
</tr>
<tr>
<td>281</td>
<td></td>
<td>286</td>
<td></td>
<td>298</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>300</td>
</tr>
</tbody>
</table>

Write the next 10 numbers after 300.

300: _____; _____; _____; _____; _____; _____; _____; _____; _____; _____;
What’s the jump?

```
<table>
<thead>
<tr>
<th>301</th>
<th>281</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>171</td>
<td></td>
<td></td>
<td></td>
<td>211</td>
</tr>
<tr>
<td></td>
<td></td>
<td>101</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Showing and comparing

a. Write the numbers that go in each card.

```
298; 208; 301; 276; 227; 269; 311
```

b. Write the numbers in order from smallest to biggest.

```
_____; _____; _____; _____; _____; _____; _____; _____
```

Write the missing numbers.

Start

```
200  +25  225  237  249
```

End

```
300  286  278  261
```
Adding and subtracting with 100s

**Using blocks to add**

![Blocks for addition](image)

\[
\begin{align*}
100 &+ 304 + 100 + 403 \\
= &200707 \\
= &277
\end{align*}
\]

**Follow the two methods. Show each answer in two ways.**

**a.** 132 + 123

- **Busi's method**
  \[
  100 + 100 + 30 + 20 + 2 + 3 \\
  = 200 + 50 + 5 \\
  = 255
  \]

- **Dumi's method**
  \[
  132 + 123 \\
  = 200 + 50 + 5 \\
  = 255
  \]

**b.** 114 + 162

- **Busi's method**
  \[
  \text{(Still to be done)}
  \]

- **Dumi's method**
  \[
  \text{(Still to be done)}
  \]
Study each method. Work out each sum in two ways.

a. 158 – 146

Busi’s method

\[= 100 - 100 + 50 - 40 + 8 - 6\]

\[= 0 + 10 + 2\]

\[= 12\]

Dumi’s method

\[158 - 146\]

\[= 0 + 10 + 2\]

\[= 12\]

b. 194 – 122

c. 288 – 199
Target 400

Counting and writing the 400s

Count on from 300 to 400.

Say the numbers as you go.

Write the missing numbers on the grid.

<table>
<thead>
<tr>
<th>301</th>
<th></th>
<th></th>
<th></th>
<th>310</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>331</td>
<td></td>
<td>335</td>
<td></td>
<td>330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>249</td>
</tr>
<tr>
<td>273</td>
<td></td>
<td>365</td>
<td>368</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>390</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
</tr>
</tbody>
</table>

Write the next 9 numbers after 400.

400: __; __; __; __; __; __; __; __; __;
Count forwards and backwards

a. Counting forward from 300 in tens.

Start: 300

End:

b. Count back from 400 in tens.

Start: 400

End:

Write as one number

300 + 20 + 4 = _______
300 + 50 + 3 = _______
300 + 60 + 2 = _______
300 + 80 + 1 = _______

300 + 10 + 5 = _______
300 + 70 + 7 = _______
300 + 90 + 9 = _______
300 + 40 + 8 = _______

Write the answers in order from smallest to biggest.

______, _______, _______, _______, _______, _______, _______, _______
Weighing in

Add some kilograms.
Add and write the answers.

78 kg
76 kg
84 kg
86 kg
94 kg

+ 14 kg

+ 5 kg

97 kg

Rounding off and adding!

Think smart!

Jackal 25 kg
Tortoise 98 kg
Baboon 59 kg
Baby zebra 88 kg
Pelican 9 kg

Round off the mass of each animal to the nearest 10 kg.

__________________________________________________________

Write the mass of each animal in order from light to heavy.

__________________________________________________________

Estimate the total mass of the 5 animals.

__________________________________________________________
Combine their mass

Steps
- Use your rounded off amounts to estimate.
- Estimate the mass of the animals in each row.
- Calculate the totals using the actual mass.
- Compare the two totals and write the difference.

<table>
<thead>
<tr>
<th>I estimate</th>
<th>I calculate</th>
<th>The difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vusi’s mass

Vusi adds his own mass to the mass of and .
Their total mass is 239 kg. How much does Vusi weigh? Show you answer.

What’s my weight?

Play in a group. Take turns . . .
Add your mass to the mass of some of the animals. Work out the total. Tell the answer to the group. Don’t show them your work! They must then try and work out your mass.
### Target 500

#### Counting and writing

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>401</td>
<td>405</td>
<td>410</td>
<td>411</td>
<td>415</td>
<td>420</td>
<td>422</td>
<td>427</td>
<td>434</td>
</tr>
<tr>
<td>434</td>
<td>438</td>
<td>442</td>
<td>446</td>
<td>450</td>
<td>454</td>
<td>458</td>
<td>462</td>
<td>466</td>
<td>470</td>
</tr>
<tr>
<td>470</td>
<td>474</td>
<td>478</td>
<td>482</td>
<td>486</td>
<td>490</td>
<td>494</td>
<td>498</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

a. Count on from 400. Say the numbers as you go.
b. Write the missing numbers in the grid.
c. Write the next 9 numbers after 500.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>500:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

d. Count in 2s. Write the next 8 numbers in the **2s pattern**.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>400:</td>
<td>402:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

e. Count in 5s. Write the next 8 numbers in the **5s pattern**.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>400:</td>
<td>405:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fill in the missing numbers.

a. Add forward from 400.

Start

400  +20  +30  +10  +10

End

b. Count back from 500.

Start

500  -2  498  496  494

End

446

434

414

Showing the numbers. Follow the example.

Find the totals. Use your number cards to show each total.

<table>
<thead>
<tr>
<th>405 + 10</th>
<th>415</th>
<th>400 + 10 + 5</th>
<th>398 + 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>446 + 10</td>
<td></td>
<td></td>
<td>424 + 10</td>
</tr>
<tr>
<td>455 + 10</td>
<td></td>
<td></td>
<td>460 + 20</td>
</tr>
</tbody>
</table>
### More adding and subtracting

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 0 0</td>
<td>5 0</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 0 0</td>
<td>3 0</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 0 0</td>
<td>8 0</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 8 9</td>
<td></td>
</tr>
</tbody>
</table>

#### You are going to use Busi’s and Dumi’s methods again to add.

a. \(245 + 231\)

**Busi’s method**
- \(= 200 + 200 + 40 + 30 + 5 + 1\)
- \(= 400 + 70 + 6\)
- \(= 476\)

**Dumi’s method**
- \(245 + 231\)
- \(= 400 + 70 + 6\)
- \(= 476\)

b. \(278 + 136\)

---

c. \(265 + 148\)

---
We are going to use Busi’s and Dumi’s methods to subtract.

a. \( 476 - 324 \)

Busi’s method
\[
= 400 - 300 + 70 - 20 + 6 - 4 \\
= 100 + 50 + 2 \\
= 152
\]

dumi’s method
\[
= 476 + 324 \\
= 100 + 50 + 2 \\
= 152
\]

b. \( 489 - 456 \)

c. \( 482 - 161 \)

Reaching the target

Study the picture.

How much more to reach the target? 

\( R \)
Sharpen your skills

Secret mountain

What's the name of the highest mountain in Gauteng? Use the code to find out.

Match each answer in the table to a letter in the code.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>N</td>
<td>O</td>
<td>P</td>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
<td>X</td>
<td>Y</td>
<td>Z</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number clues</th>
<th>Answer</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: $2 \times 3 \times 3 \times 1$</td>
<td>18</td>
<td>R</td>
</tr>
<tr>
<td>$50 + 50 + 50 + 100 - 200 - 45$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1 + 2 + 7 + 10 + 7 + 1 - 14$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$60 - 30 + 50 + 20 - 50 - 15 - 20$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$3 + 2 + 7 + 1 + 2 + 1 + 3$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$5 + 3 + 30 = 4 + 2 + 12 +$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100 - 5 - 70 = 20 +$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$36 + 44 - 60 - 2$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10 + 15 = 14 +$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2 + 1 + 14 + 9 + 14 = 25 +$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1 \times 2 \times 2 \times 2 \times 2$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mountain's name is

[Blank]

The mountain's name is [Blank].
Look, think and answer!

What shape will number 16 be? Tick (✓) the right one.

What shape will number 18 be? Tick (✓) the right one.

What shape will number 23 be? Tick (✓) the right one.

a.

b.

Number 50 will be a ▮. True or False?

Number 100 will be a ○. True or False?

Number 28 will be a ◐. True or False?

Which is more?

To get R2.50 a day pocket money for June and July.

Or to get R150 total pocket money for the two months?

Show how you worked it out.
Symmetry

What do you notice about these shapes?

A line of symmetry divides a shape into two halves so that each half is a mirror-image of the other.

A shape has symmetry if you can fold it along the line of symmetry so that the two halves match exactly.

Draw a line of symmetry for each shape.

Is the dotted line a line of symmetry or not. Circle the (Y) Yes or (N) No.

Is this a line of symmetry? Why?
Draw shapes to make the picture symmetrical.
We have done the first one for you.

b. c.
## Building up to 500

Counting the apples.

Complete and multiply

<table>
<thead>
<tr>
<th>1 basket holds _____________ apples.</th>
<th>$1 \times 10 = 10$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 baskets hold _____________ apples.</td>
<td>$3 \times 10 =$</td>
</tr>
<tr>
<td>5 baskets hold _____________ apples.</td>
<td></td>
</tr>
<tr>
<td>4 baskets hold _____________ apples.</td>
<td></td>
</tr>
<tr>
<td>2 baskets hold _____________ apples.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 crate holds 100 apples.</th>
<th>2 crates hold _____________ apples.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 crates hold _____________ apples.</td>
<td>4 crates hold _____________ apples.</td>
</tr>
<tr>
<td>5 crates hold _____________ apples.</td>
<td>2 half crates hold ___________ apples.</td>
</tr>
</tbody>
</table>
There are 10 apples in 1 basket.

There are ___________ baskets in one crate.

There are ___________ apples in one crate.

How many apples are there altogether? ______________

Calculating, showing and writing

First use number cards to show each total. Then write in the number.

| 3 crates + 4 baskets + 5 apples | = 345 apples |
| 4 crates + 5 baskets + 7 apples | = ____________ apples |
| 5 crates + 2 baskets + 3 apples | = ____________ apples |
| 4 crates + 7 baskets + 2 apples | = ____________ apples |
Multiplication and division (10)

Counting the apples.
Fill in the table.
How many baskets hold the apples?

<table>
<thead>
<tr>
<th>Apples</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baskets</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \div \text{ sum} \]

\[ 50 \div 10 = 5 \]

\[ \times \text{ sum} \]

\[ 5 \times 10 = 50 \]

Divide the apples between the children. Make a drawing.
Write a division and multiplication sum to check your answer.

a.

Check you answers

\[ \square \div \square = \square \]

\[ \square \times \square = \square \]
b.

Write a $\div$ sum

Write a $\times$ sum to check your answers

Use the numbers to make your own number sentences.

Example

\[
\begin{array}{c}
\div \quad 40 \div 10 = 4 \\
\times \quad 4 \times 10 = 40
\end{array}
\]

a. \[
\begin{array}{c}
\div \\
\times
\end{array}
\]

b. \[
\begin{array}{c}
\div \\
\times
\end{array}
\]

c. \[
\begin{array}{c}
\div \\
\times
\end{array}
\]

Write a number 10 smaller and 10 bigger than the given number.

____, 460, _____, 90, _____, 500, _____

11 12 13 14 15 16 17 18 19 20
Count in 2s
Counting forwards and backwards in 2s

a. 232; 234; _________; _________; _________; 242; _________; _________; 248
b. 500; _________; 496; _________; _________; 490; _________; _________; _________
c. 460; _________; _________; 400; _________; _________; 360; _________; _________
d. 341; _________; 361; _________; _________; 391; _________; 411; _________;

Pairs of gloves

a. How many pairs of gloves in one row? ______________
b. How many single gloves in one row? ______________
c. How many rows? ______________
d. How many gloves altogether? ______________
e. Show how you work it out.
f. Write your answer as a number sentence.
   ______________ × ______________ = ______________
How many gloves?
Write in the tables.

### a.

<table>
<thead>
<tr>
<th>Pair of gloves</th>
<th>1</th>
<th>10</th>
<th>5</th>
<th>50</th>
<th>4</th>
<th>40</th>
<th>3</th>
<th>30</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of gloves</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### b.

<table>
<thead>
<tr>
<th>Single gloves</th>
<th>20</th>
<th>21</th>
<th>70</th>
<th>73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pairs that can be made</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single gloves left over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Count in twos

a. Which number comes in between?

264, ____ , 268  
391, ____ , 395  
414, ____ , 410

b. Write the next two numbers.

373, 375, 377, 379  
480, 482, ____ , ____  
262, 264, ____ , ____

c. Write the next two numbers.

346, 348, ____ , ____  
415, 417, ____ , ____  
297, 299, ____ , ____
Mrs Mabena has some pretty tiles.

She uses them to pave an area in her garden.

There are 6 square tiles of the same size.

I can make 1 row with 6 tiles.

I can make 2 rows with 3 tiles in a row.

I can make 3 rows with 2 tiles in each row.

Now it’s your turn!

Shade blocks to show how you can arrange 8 and 9 square tiles.

Write number sentences for each drawing.
Arrange 12 tiles

Thabo has 12 square tiles to pave next to the house. Help him find all the ways he can do this.

Write a number sentence for each way.

Example:

\[
\begin{array}{cccccc}
\, & \, & \, & \, & \, & \, \\
\, & \, & \, & \, & \, & \, \\
\, & \, & \, & \, & \, & \, \\
\, & \, & \, & \, & \, & \, \\
\, & \, & \, & \, & \, & \, \\
\end{array}
\]

\[
1 \times 12 = 12 \\
12 \times 1 = 12
\]

I can multiply!

\[
\begin{array}{c}
12 = 2 \times \\
6 = 3 \times \\
\end{array}
\]

\[
\begin{array}{c}
3 \times \, = 12 \\
\, \times 3 = 12 \\
\end{array}
\]

\[
\begin{array}{c}
9 = \, \times 3 \\
24 = 3 \times \, \\
\end{array}
\]

Arrange 24 tiles

- Use the grid in Cut-out sheet 2.
- Shade 24 blocks in different ways.
- Write number sentences to match each drawing.
Using fives

Knowing your 5s
Fill in the answers.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>×5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Counting the candles

a. How many candles in each box? ________________
b. How many boxes in each row? ________________
c. How many candles in each row? ________________
d. How many candles altogether? ________________

Showing the answer

Tick (✓) the number sentences that show the total number of candles.

a. $5 \times 3 \times 3 = \square$
b. $15 \times 3 = \square$
c. $3 \times 5 \times 5 = \square$
d. $15 \times 5 = \square$
Counting forwards and backwards in 5s

a. 85; ______; ______; 70; ______; ______; 55; ______; ______
b. 240; ______; ______; 255; ______; ______; ______; ______; 280
c. 405; ______; 395; ______; ______; 380; ______; ______; 365; ______

Collecting R5 coins

The children collect R5 coins. How many R5 coins do they need to collect to have R___?
We have done the first two for you.

<table>
<thead>
<tr>
<th>R5 ÷ R5</th>
<th>R10 ÷ R5</th>
<th>R15? ____</th>
<th>R20? ____</th>
<th>R25? ____</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 1 coin</td>
<td>= 2 coins</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 × R5 = R
3 × R5 = R
4 × R5 = R
6 × R5 = R

Do you see the pattern?

Multiplying by 5s

Think smart! Build on facts you know!

Example: 1 × 5 = 5; 11 × 5 = 55; 21 × 5 = 105
Time problems

Solve each problem. Use the time lines to help you.

a. Queenie visits her Dad at the clinic at 15:45.
   She leaves at 17:15.
   How long does she visit for?
   ____________________________

b. Musa goes to the park at 10:45.
   He comes home at 12:30.
   How long is he away for?
   ____________________________

c. Tumi starts to study at 13:15.
   She finishes at 14:45.
   How long does Tumi study for?
   ____________________________
Count in 3s and 4s

Pots with 3 legs

Add and write the answers:

a. How many pots in a row? _________
b. How many legs in a row? _________
c. How many rows of pots? _________
d. How many legs altogether? Show how you work it out.

Tick (✓) which number sentences below show the total.

\[ 21 \times 7 = \]  
\[ 3 \times 7 \times 3 = \]  
\[ 3 \times 4 \times 2 = \]  
\[ 21 \times 3 = \]

How many legs?

Think fast. Think smart.

<table>
<thead>
<tr>
<th>1 pot</th>
<th>3 legs</th>
<th>10 pots</th>
<th>legs</th>
<th>5 pots</th>
<th>legs</th>
<th>2 pots</th>
<th>legs</th>
<th>15 pots</th>
<th>legs</th>
<th>12 pots</th>
<th>legs</th>
<th>5 pots</th>
<th>legs</th>
<th>13 pots</th>
<th>legs</th>
<th>14 pots</th>
<th>legs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table legs

<table>
<thead>
<tr>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>8</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At the factory

A carpenter makes tables. He first makes the legs. He has made 48 so far. How many tables can he make?

How many more legs does he need for one more table?

Complete the grid by filling in the answers

\[ \times 3 \]  
\[ \times 4 \]  
\[ 6 \]  
\[ 8 \]
Count in 50s

One child, one blanket!
How many children? Estimate, then count.

Blanket of Hope
Keep our children warm
NPO 123-098

All the children in the picture get a blanket.
How many children are there? _____

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Count</th>
<th>Compare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many are 🧸 boys? _____ How many are 🎀 girls? _____

What do they pay?

Gwazi buys 2
She pays R

Mrs Chaane buys 5
She pays R

Thembani Stores buy 20
They pay R

<table>
<thead>
<tr>
<th>5 🧶 for R50 = R250</th>
<th>10 🧶 for R50 = R500</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 🧶 for R50 = R____</td>
<td>15 🧶 for R50 = R____</td>
</tr>
<tr>
<td>3 🧶 for R50 = R____</td>
<td>6 🧶 for R50 = R____</td>
</tr>
<tr>
<td>7 🧶 for R50 = R____</td>
<td>12 🧶 for R50 = R____</td>
</tr>
<tr>
<td>8 🧶 for R50 = R____</td>
<td>9 🧶 for R50 = R____</td>
</tr>
</tbody>
</table>

How many are boys? _____ How many are girls? _____

Donate now!
R50 for 1 blanket

How long will it take? Use a calendar.
The grade 3 class collects money to buy 4 blankets.
They collect R5 a day for 5 days a week.

How many weeks do they need to collect money for the blankets?
Fractions: halves and quarters

Divide the balls equally between the boxes.

- How many balls are in each box? [ ]
- How many balls are in each box? [ ]
- How many balls in the purple box? [ ]
- How many balls in the purple box? [ ]
- What fraction is in the purple box? [ ]
- What fraction is in the purple box? [ ]

Look at the pictures and answer the questions.

How many circles do you count? [ ]
What is \( \frac{1}{2} \) of the circles? [ ]
How many circles do you count? [ ]
What is \( \frac{1}{4} \) of the circles? [ ]

Look at the fraction strips.

\[ \begin{array}{c|c|c|c|c}
 & \text{whole} \\
\hline
\frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
\hline
\frac{1}{4} & \frac{1}{4} & \frac{1}{4} & \frac{1}{4} \\
\hline
\end{array} \]

a. How many halves \( (\frac{1}{2}) \) make one whole? [ ]
How many quarters \( (\frac{1}{4}) \) make one whole? [ ]
How many quarters \( (\frac{1}{4}) \) make one half? [ ]

b. Look at the diagrams and write a fraction for the shaded part.

\[ \begin{array}{c|c|c|c|c}
& \frac{1}{2} & \frac{1}{4} & \frac{1}{2} \\
\hline
\frac{1}{2} & \frac{1}{4} & \frac{1}{2} \\
\hline
\end{array} \]

Which fraction is bigger \( \frac{1}{2} \) or \( \frac{1}{4} \): [ ]
Fractions: halves, thirds and sixths

Divide the cans (cylinders) equally between the boxes.

Total cans: 12
- How many cans in the purple box? 6
- What fraction is in the purple box? \( \frac{1}{2} \)

Look at the pictures and answer the questions.

- How many circles do you count?
- What is \( \frac{1}{3} \) of the circles?
- What is \( \frac{2}{3} \) of the circles?
- What is \( \frac{3}{3} \) of the circles?
- What is \( \frac{1}{6} \) of the circles?
- What is \( \frac{2}{6} \) of the circles?
- What is \( \frac{3}{6} \) of the circles?
- What is \( \frac{4}{6} \) of the circles?
- What is \( \frac{5}{6} \) of the circles?
- What is \( \frac{6}{6} \) of the circles?

Show one half of the length on the ruler. This equals to ____ cm
Show one third of the length on the ruler. This equals to ____ cm
Show one sixth of the length on the ruler. This equals to ____ cm

Look at the fraction strips. Complete the sentences.

- There are ____ halves in a whole.
- There are ____ thirds in a whole.
- There are ____ sixths in a whole.
- There are ____ sixths in a half.
- There are ____ sixths in a third.

Write a fraction for the shaded part.

Circle the bigger fraction.

a. \( \frac{1}{3} \) \( \frac{1}{3} \)
b. \( \frac{1}{2} \) \( \frac{1}{6} \)
c. \( \frac{1}{2} \) \( \frac{2}{6} \)
Fractions: fifths

Divide the cans into the 5 boxes.

- In one fifth of the boxes are ___ cans.
- In two fifths of the boxes are ___ cans.
- In three fifths of the boxes are ___ cans.
- In four fifths of the boxes are ___ cans.
- In five fifths of the boxes are ___ cans.

Look at the picture and answer the questions.

How many chocolates are in the box? ___

- one fifth (1/5) of the chocolates equal to ___
- two fifths (2/5) of the chocolates equal to ___
- three fifths (3/5) of the chocolates equal to ___
- four fifths (4/5) of the chocolates equal to ___
- five fifths (5/5) of the chocolates equal to ___

On day 1 I ate 1/5 of the chocolates. How many chocolates are left? ___

On day two I ate another 1/5. How many chocolates are left? ___

Circle bigger or smaller:

a. 1/2 is ___ bigger/smaller than 3/6.

b. 1/3 is ___ bigger/smaller than 1/2.

c. 1/5 is ___ bigger/smaller than 1/6.

d. 1/6 is ___ bigger/smaller than 1/3.

e. 3/6 is ___ bigger/smaller than 2/6.
3D objects

Count the boxes (prisms). □
Count the balls (spheres). □
Count the cylinders. □

These are all boxes.
Use Cut-out sheets 3 and 4 to make them.

Each flat surface is called a face. Stick or draw one smiley on each face of the boxes.

How many faces did you stick on:
cube □ prism □ prism □

Are the faces of the prisms flat or curved? □

Now make the cylinder from Cut-out sheet 4.
Are the faces of the cylinder flat or curved? □

Use your objects to build the following:

Describe the position of the cylinder using the words.
On the side □ In front □ On top □

Use the words below to complete the sentences.
The girl looks at the ____________ of the building.
The man looks at the ____________ of the building.
The bird looks at the ____________ of the building.
side □ front □ top □
Double and half

Remember! We can show this in a drawing...

Do you remember?

2 is half of 4
4 is half of 8
20 is half of 40
200 is half of 400

4 is double 2
40 is double 20
400 is double 200

Example

Double 40

a. Double 60
b. Double 180
c. Double 200

Double the number using a number line. The first example is given to you.

0 20 40 60 80 100 120 140 160 180 200

0 50 100 150 200 250 300 350 400 450 500

0 100 150 200 250 300 350 400 450 500

Complete the following

a. Double 100
b. Double 150
c. Double 200
d. Double 250

Complete the following

a. Half 100
b. Half 150
c. Half 200
d. Half 250

Finding halves

Remember! We can show this in a drawing...

a. Half 220
b. Half 180
c. Half 260
d. Half 320

Complete the following

a. Double 10
b. Double 12

c. Double 20

d. Double 30

a. Half 10
b. Half 12
c. Half 20
d. Half 30
More double and halving

Finding the doubles or halves

a. 73  146  d. 134  e. 166
b. 73  e. 166

c. 96  f. 89

Saving for a bicycle

Aakar saves R25 a week to buy this bicycle. For how many weeks must he save?

Answer: _________ weeks

Aakar's shoes cost twice as much as these. How much do Aakar's shoes cost? R__________

Phindi's dress is double the price of this one. How much does Phindi's dress cost? R__________

What goes in? What comes out?

Follow the example. Fill in the missing numbers.

double

50
90
75
88

halve

124
110
110
72
98

How many rands?

Musa wants the shirt. He only has half the amount. How much does he still need? R__________

Aakar saves R25 a week to buy this bicycle. For how many weeks must he save?

Answer: _________ weeks

On sale

All the items are on sale for half the price. Write the sale price next to each item.

a. Blankets R190
   Sale price ________________

b. Sheets R154
   Sale price ________________

c. Cushions R54
   Sale price ________________

d. Chairs R220
   Sale price ________________

Half price: was R900

Sale R450

How many rands?

Musa wants the shirt. He only has half the amount. How much does he still need? R__________

Aakar’s shoes cost twice as much as these. How much do Aakar’s shoes cost? R__________

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Phindi’s dress is double the price of this one. How much does Phindi’s dress cost? R__________

What goes in? What comes out?

Follow the example. Fill in the missing numbers.
Group and combine

Grouping the children

Mrs Ndaba wants to divide the class into equal-sized groups for outdoor games. First she puts them into groups of 4.

a. Count the children?

b. How many teams does she make?

c. Show all the other ways they can be grouped into equal sized groups.

Predict: What if Phindi has 6 different colours of shirts and shorts?

How many outfits can she make?
Maths fun

Look for a rule
Use the rule to find the missing numbers.

Now do these:

Build to 20 in 3 different ways.

Challenge
Just think!
Use the numbers 1, 2, 3, 4, and 5.
The 3 numbers in each row must add up to 10.
Rule: Use each number only once.

Finding the numbers

a. Rule: The numbers in each row must add up to 16.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

b. Rule: The 3 numbers, across the rows and down the columns, add up to the same total.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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c. Rule: Write in any 5 numbers that add up to the middle number inside the star.

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