WHAT SHOULD YOU DO IF YOU ARE RAPED OR SEXUALLY ASSAULTED?

1. Go to a safe place where you can get help
2. Tell someone you trust what happened as soon as possible
3. Do not throw away your clothes or wash yourself
4. Put the clothes you were wearing in a paper bag or wrap them in newspaper
5. Go to a hospital as soon as possible
6. It is advisable to report the rape to the police
7. Tell the police if you are threatened by the perpetrator at any time
8. Get treatment and medication within 72 hours to prevent HIV, other sexually transmitted infections and pregnancy

REMEMBER, IT’S NEVER THE FAULT OF THE PERSON WHO WAS RAPED, ABUSED, VIOLATED OR HARASSED!

GET HELP AND SUPPORT
If you or someone you know is being sexually harassed or abused, get help to stop the abuse. Speak to someone you trust, tell your school, go to your local police station or phone one of the following national numbers:

- SAPS Crime Stop: 086 0010 111
- SAPS Emergency Number: 10111
- Childline: 0800 055 555
- Lifeline: 011 781 2337/0861 322 322
- Department of Basic Education National Hotline: 0800 20 29 33

ACT AGAINST ABUSE

Name: 
Class: 

Mrs Angie Motshekga, Minister of Basic Education

Dr Reginah Mhaule, Deputy Minister of Basic Education

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, Dr Reginah Mhaule.

The Rainbow Workbooks form part of the Department of Basic Education’s range of interventions aimed at improving the performance of South African learners in the first six grades. 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, in all the official languages, 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.

Published by the Department of Basic Education

222 Milton Road

Prenton

Pretoria

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Eleventh edition 2021

ISBN 978-1-4315-0015-4

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Mathematics

Grade 4

Book 1
1. Revision worksheets: R1 to R16
   Key concepts from Grade 3
2. Worksheets: 1 to 64

Book 2
3. Worksheets: 65 to 144

Name:
The structure of a worksheet

Worksheet number
(Revision R1 to R16, Ordinary 1 to 144)

Topic introduction
(Text and pictures to help you think about
and discuss the topic of the worksheet.)

Term indicator
(There are forty worksheets per term.)

Questions

Colour code for content area

<table>
<thead>
<tr>
<th>Content</th>
<th>Side bar colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision</td>
<td>Purple</td>
</tr>
<tr>
<td>Number</td>
<td>Turquoise</td>
</tr>
<tr>
<td>Patterns and functions (algebra)</td>
<td>Electric blue</td>
</tr>
<tr>
<td>Space and shape (geometry)</td>
<td>Orange</td>
</tr>
<tr>
<td>Measurement</td>
<td>Green</td>
</tr>
<tr>
<td>Data handling</td>
<td>Red</td>
</tr>
</tbody>
</table>

Language colour code:
Afrikaans (Red), English (Blue)

Example frame (in yellow)

Fun/challenge/problem solving activity
(This is an end of worksheet activity that may include
fun or challenging activities that can also be shared
with parents or brothers and sisters at home.)

Teacher assessment rating,
signature and date
PART 1
Revision
Key concepts from Grade 3

WORKSHEETS R1 TO R16

Name:
How many beads are there? See how fast can you count them.

1. Write down how many beads you counted?
   a. 
   b. 
   c. 

The first 16 worksheets are revision activities. They also summarise important concepts you need in Grade 4.
2. Write down how many beads there are.

a.

These blocks of beads have the same number in each as the block above. Write down the total number of beads.

b.

c.

I made a nice brooch with my 111 beads.
What to do:
- Lay in pairs.
- Cut out the cards from Cut-out sheet 1 at the back of the book.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- See who is first to give the total number of beads on the cards.
- Check your partner’s answer.
- Do the same with 6/7/8/9/ and 10 cards.
- The person with the most correct answers is the winner.

What you need:
- Cut-out 1.

How quick are you?
What number will these cards make?

3 0 0

2 0

5

In words it is
Three hundred and twenty-five

1. Match column A with column B.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 0 0</td>
<td>![Image] 8</td>
</tr>
<tr>
<td>1 0 0</td>
<td>![Image] 4 0 3</td>
</tr>
<tr>
<td>4 0 0</td>
<td>![Image] 1 0 2</td>
</tr>
</tbody>
</table>

2. Write the number in the correct column:

<table>
<thead>
<tr>
<th>Number cards</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 2 0 0</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>b. 4 0 0</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>c. 1 0 0</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>d. 9 3 0 0</td>
<td>9</td>
<td>3</td>
<td>0 0</td>
</tr>
<tr>
<td>e. 4 0 2 3</td>
<td>4 0 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Complete the following. We have done the first one to guide you.
   a. 723 = 7 hundreds + 2 tens + 3 units
   b. 648 = ____________________________
   c. 521 = ____________________________
   d. 704 = ____________________________
   e. 230 = ____________________________

4. The first one is done for you. Write the other numbers also in expanded notation.
   a. 654 = 600 + 50 + 4
   b. 203 = ____________________________
   c. 745 = ____________________________
   d. 650 = ____________________________
   e. 605 = ____________________________
   f. 475 = ____________________________

5. Write the following in words.
   a. 54
   b. 308
   c. 847

<table>
<thead>
<tr>
<th>What you need:</th>
<th>What to do:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cut-out 2</td>
<td>- Play in pairs.</td>
</tr>
<tr>
<td>- Cut-out 3: Cut and fold the dice (units to hundreds)</td>
<td>- Each player roles a hundreds dice (red, blue or orange dice), a tens (green dice) and a units (yellow dice) dice.</td>
</tr>
<tr>
<td></td>
<td>- Each player makes his or her own 3-digit number with the number cards.</td>
</tr>
<tr>
<td></td>
<td>- The winner is the player with the greatest number.</td>
</tr>
<tr>
<td></td>
<td>- Do the same activity five times.</td>
</tr>
</tbody>
</table>

Remember zero is a place holder.
What do addition and subtraction mean?

**Examples:**

**Example 1: 612 + 56**

\[
\begin{array}{c}
612 \\
600 \\
10 \\
2 \\
50 \\
6 \\
\end{array}
\]

\[
\begin{array}{c}
300 \\
80 \\
9 \\
= 389 + 74 \\
= 300 + 80 + 70 + 9 + 4 \\
= 300 + 150 + 13 \\
= 300 + 100 + 50 + 10 + 3 \\
= 400 + 60 + 3 \\
= 463
\end{array}
\]
2. Add the following using the given example.
   a. 124 + 35
   
   \[
   \begin{array}{c}
   124 \\
   + 35 \\
   \hline
   \end{array}
   \]
   
   124 + 35
   = 100 + 20 + 30 + 4 + 5
   = 
   = 

   b. 678 + 25
   
   \[
   \begin{array}{c}
   678 \\
   + 25 \\
   \hline
   \end{array}
   \]
   
   678 + 25
   = 600 + 70 + 20 + 8 + 5
   = 
   = 

   Examples:
   Example 1: 356 - 3
   
   \[
   \begin{array}{c}
   356 \\
   - 3 \\
   \hline
   \end{array}
   \]
   
   356 - 3
   = 300 + 50 + (6 - 3)
   = 300 + 50 + 3
   = 353

   Example 2: 241 - 6
   
   \[
   \begin{array}{c}
   241 \\
   - 6 \\
   \hline
   \end{array}
   \]
   
   241 - 6
   = 200 + 40 + (1 - 6)
   = 200 + 30 + (11 - 6)
   = 200 + 30 + 5
   = 235

3. Subtract the following using the given example.
   a. 659 - 5
   
   \[
   \begin{array}{c}
   659 \\
   - 5 \\
   \hline
   \end{array}
   \]
   
   659 - 5
   = 600 + 50 + (9 - 5)
   = 
   = 

   b. 392 - 8
   
   \[
   \begin{array}{c}
   392 \\
   - 8 \\
   \hline
   \end{array}
   \]
   
   392 - 8
   = 300 + 90 + (2 - 8)
   = 
   = 

   (Examples)
### More Addition and Subtraction to 999

#### How fast can you add the following?

<table>
<thead>
<tr>
<th>100</th>
<th>2</th>
<th>10</th>
<th>2</th>
<th>10</th>
<th>2</th>
<th>10</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>300</td>
<td>100</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>200</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Examples:

**Example 1:**

\[ 212 + 456 \]

\[
\begin{array}{c}
200 \\
10 \\
2 \\
+ \\
400 \\
50 \\
6 \\
\end{array} = 200 + 400 + 10 + 50 + 2 + 6
\]

\[
\begin{array}{c}
600 \\
60 \\
+ \\
8 \\
\end{array} = 600 + 60 + 8
\]

\[
\begin{array}{c}
668 \\
\end{array} = 668
\]

**Example 2:**

\[ 124 + 387 \]

\[
\begin{array}{c}
100 \\
20 \\
4 \\
+ \\
300 \\
80 \\
7 \\
\end{array} = 100 + 300 + 20 + 80 + 4 + 7
\]

\[
\begin{array}{c}
400 \\
+ \\
11 \\
\end{array} = 400 + 100 + 11
\]

\[
\begin{array}{c}
500 \\
+ \\
10 \\
1 \\
\end{array} = 500 + 10 + 1
\]

\[
\begin{array}{c}
511 \\
\end{array} = 511
\]

#### 1. Add the following using the examples above.

**a. 234 + 362**

\[
\begin{array}{c}
200 \\
10 \\
2 \\
+ \\
300 \\
60 \\
+ \\
4 \\
\end{array} = 200 + 300 + 30 + 60 + 4 + 2
\]

\[
\begin{array}{c}
\end{array} = 862
\]

**b. 644 + 213**

\[
\begin{array}{c}
200 \\
10 \\
2 \\
+ \\
400 \\
50 \\
6 \\
\end{array} = 200 + 400 + 10 + 50 + 2 + 6
\]

\[
\begin{array}{c}
\end{array} = 856
\]

**c. 396 + 145**

\[
\begin{array}{c}
300 \\
100 \\
90 \\
+ \\
40 \\
16 \\
5 \\
\end{array} = 300 + 100 + 90 + 40 + 6 + 5
\]

\[
\begin{array}{c}
\end{array} = 895
\]

**d. 247 + 356**

\[
\begin{array}{c}
200 \\
40 \\
7 \\
+ \\
300 \\
50 \\
6 \\
\end{array} = 200 + 300 + 40 + 50 + 7 + 6
\]

\[
\begin{array}{c}
\end{array} = 703
\]
Examples:
Example 1:
\[
\begin{align*}
700 &\quad 80 &\quad 4 &\quad - &\quad 300 &\quad 20 &\quad 3 \\
&\quad (700 - 300) &\quad (80 - 20) &\quad (4 - 3) \\
&\quad 400 &\quad 60 &\quad 1 \\
&\quad 461
\end{align*}
\]

Example 2:
\[
\begin{align*}
500 &\quad 40 &\quad 6 &\quad - &\quad 200 &\quad 80 &\quad 8 \\
&\quad (500 - 200) &\quad (40 - 80) &\quad (6 - 8) \\
&\quad 300 &\quad (30 - 80) &\quad (16 - 8) \\
&\quad 200 &\quad (130 - 80) &\quad (16 - 8) \\
&\quad 200 &\quad 50 &\quad 8 \\
&\quad 258
\end{align*}
\]

2. Subtract the following using the given example.

a. \(486 - 214\)

\[
\begin{align*}
&\quad (400 - 200) &\quad (80 - 10) &\quad (6 - 4) \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad \quad 272
\end{align*}
\]

b. \(698 - 453\)

\[
\begin{align*}
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = 245
\end{align*}
\]

c. \(384 - 267\)

\[
\begin{align*}
&\quad (300 - 200) &\quad (80 - 60) &\quad (4 - 7) \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = 117
\end{align*}
\]

d. \(413 - 168\)

\[
\begin{align*}
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = \\
&\quad = 245
\end{align*}
\]

What is the size of your number:

What you need:
- Use the 10s and 100s dice made in the previous activity.
- Piece of paper.

What to do:
- Roll the tens (green) dice.
- Add the number landed on to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the next four numbers on the blue card.
- Repeat the activity using both the 10s and 100s dice.
- Learners check each other’s addition sums.
- The winner is the person with the most correct answers.

Repeat the activity using subtraction.
We have six beads repeated four times.

This is the same as

\[ 6 + 6 + 6 + 6 \]

which is the same as:

\[ 6 \times 4 \]

1. Complete the patterns:
   a. 2, 4, 6, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___
   b. 3, 6, 9, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___
   c. 5, 10, 15, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___
   d. 4, 8, 12, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___
   e. 10, 20, 30, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___, ___

2. Complete the table:

<table>
<thead>
<tr>
<th>Diagram</th>
<th>Addition sum</th>
<th>Words</th>
<th>Multiplication sum</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram 1" /></td>
<td>4 + 4 + 4 = 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image2.png" alt="Diagram 2" /></td>
<td></td>
<td>Four groups of five</td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Diagram 3" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image4.png" alt="Diagram 4" /></td>
<td></td>
<td>3 \times 5 = 15</td>
<td></td>
</tr>
</tbody>
</table>
3. Match the cats with the mice.

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>7 \times 3</td>
<td>3 \times 3</td>
<td>6 \times 4</td>
<td>5 \times 2</td>
</tr>
</tbody>
</table>

4. Fill in the $\times$ and $=$ in the right places.

<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>
<th>n</th>
<th>o</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 \times _ _ _ 3 _ _ _ _</td>
<td>16 \times _ _ _ 4 _ _ _ _</td>
<td>28 \times _ _ _ 7 _ _ _ _</td>
<td>6 \times _ _ _ 6 _ _ _ _</td>
<td>12 \times _ _ _ 3 _ _ _ _</td>
<td>7 \times _ _ _ 7 _ _ _ _</td>
<td>18 \times _ _ _ 2 _ _ _ _</td>
<td>4 \times _ _ _ 12 _ _ _ _</td>
<td>54 \times _ _ _ 9 _ _ _ _</td>
<td>12 \times _ _ _ 7 _ _ _ _</td>
<td>50 \times _ _ _ 5 _ _ _ _</td>
<td>27 \times _ _ _ 3 _ _ _ _</td>
<td>12 \times _ _ _ 2 _ _ _ _</td>
<td>9 \times _ _ _ 9 _ _ _ _</td>
<td>60 \times _ _ _ 5 _ _ _ _</td>
</tr>
</tbody>
</table>

---

**What you need:**
- Use the units and tens dice made in the previous activity from Cut-out 3.
- Piece of paper.

**What to do:**
- Roll the units and tens dice. Multiply the two numbers. Write down the multiplication sum with its answer.
- Repeat doing this until your teacher says stop after a minute.
- Give your multiplication sum to your friend to mark.
- The winner is the person with the most correct answers.
See how many sums you can make by multiplying a number from the square by a number in a circle.

1. Complete the table.

<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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1x1=</td>
<td>1x2=</td>
<td>1x3=</td>
<td>1x4=</td>
<td>1x5=</td>
<td>1x6=</td>
<td>1x7=</td>
<td>1x8=</td>
<td>1x9=</td>
</tr>
<tr>
<td>2</td>
<td>2x1=</td>
<td>2x2=</td>
<td>2x3=</td>
<td>2x4=</td>
<td>2x5=</td>
<td>2x6=</td>
<td>2x7=</td>
<td>2x8=</td>
<td>2x9=</td>
</tr>
<tr>
<td>3</td>
<td>3x1=</td>
<td>3x2=</td>
<td>3x3=</td>
<td>3x4=</td>
<td>3x5=</td>
<td>3x6=</td>
<td>3x7=</td>
<td>3x8=</td>
<td>3x9=</td>
</tr>
<tr>
<td>4</td>
<td>4x1=</td>
<td>4x2=</td>
<td>4x3=</td>
<td>4x4=</td>
<td>4x5=</td>
<td>4x6=</td>
<td>4x7=</td>
<td>4x8=</td>
<td>4x9=</td>
</tr>
<tr>
<td>5</td>
<td>5x1=</td>
<td>5x2=</td>
<td>5x3=</td>
<td>5x4=</td>
<td>5x5=</td>
<td>5x6=</td>
<td>5x7=</td>
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<td>5x9=</td>
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<tr>
<td>6</td>
<td>6x1=</td>
<td>6x2=</td>
<td>6x3=</td>
<td>6x4=</td>
<td>6x5=</td>
<td>6x6=</td>
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</tr>
<tr>
<td>7</td>
<td>7x1=</td>
<td>7x2=</td>
<td>7x3=</td>
<td>7x4=</td>
<td>7x5=</td>
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<td>8</td>
<td>8x1=</td>
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<td>8x6=</td>
<td>8x7=</td>
<td>8x8=</td>
<td>8x9=</td>
</tr>
<tr>
<td>9</td>
<td>9x1=</td>
<td>9x2=</td>
<td>9x3=</td>
<td>9x4=</td>
<td>9x5=</td>
<td>9x6=</td>
<td>9x7=</td>
<td>9x8=</td>
<td>9x9=</td>
</tr>
</tbody>
</table>
2. Solve the following problems. Use the example to guide you. You will need extra sheets of paper to solve the problems.

Example:

The problem: A parent gives nine bags of soccer balls to a school. Each bag contains 6 soccer balls. How many soccer balls does the parent give away?

What is the question? How many soccer balls does the parent give away?
What are the numbers? 9 (bags) and 6 (balls per bag)
What key words tell you which basic operation (+, −, x or ÷) to use? Each bag contains.
What operation must be used? Multiplication.
Draw a picture.

Write down a number sentence.  

\[ 9 \times 6 = \]

Show the calculation.  

\[ 9 \times 6 = 54 \]

Answer: The parent gives 54 soccer balls away.

a. A farmer plants 8 rows of apple trees. There are 7 apple trees in each row. How many apple trees are there in total?

b. Ann’s mother buys 5 pizzas. Each pizza is cut into four slices. How many slices are there altogether?

c. Mandla has three friends. Each of them has twenty sweets. How many sweets do they all have together?
**Number patterns**

Talk about the patterns in the table below.

<table>
<thead>
<tr>
<th></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>1</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
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<td>11</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
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<td>30</td>
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<td>47</td>
<td>48</td>
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<td>41</td>
<td>52</td>
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<td>81</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

1. What will the next number be?
   a. 40, 45, 50, __________
   b. 85, 95, 105, __________
   c. 378, 379, 380, __________
   d. 405, 410, 415, __________
   e. 599, 598, 597, __________
   f. 600, 610, 620, __________
   g. 775, 780, 785, __________
   h. 800, 802, 804, __________

2. Complete the following patterns.

   a. \(3 + 5 = \) __________
   b. \(30 + 50 = \) __________
   c. \(300 + 500 = \) __________
   d. \(4 + 2 = \) __________
   e. \(40 + 20 = \) __________
   f. \(400 + 200 = \) __________
   g. \(3 + 6 = \) __________
   h. \(30 + 60 = \) __________
   i. \(300 + 600 = \) __________
   j. \(5 + 1 = \) __________
   k. \(50 + 10 = \) __________
   l. \(500 + 100 = \) __________
   m. \(7 + 2 = \) __________
   n. \(70 + 20 = \) __________
   o. \(700 + 200 = \) __________
3. What will you put in the place of the orange?

a. $4 + 3 = \boxed{3}$

b. $6 + 2 =$

c. $5 + 4 =$

d. $+ 3 = 3 + 5$

e. $2 + =$

f. $8 + 1 = 1 +$

g. $6 + =$

h. $9 + 0 =$

i. $7 + =$

j. $+ 6 = 6 + 1$

Pattern fun
How fast can you get the answer?

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>33</td>
<td>45</td>
</tr>
</tbody>
</table>

Coloured cards...

Look at the cards. What do you notice?

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$4 + 3$</td>
<td>$5 + 6$</td>
<td>$4 + 5$</td>
<td>$2 + 7$</td>
</tr>
<tr>
<td>$3 + 4$</td>
<td>$3 + 9$</td>
<td>$8 + 1$</td>
<td>$7 + 2$</td>
</tr>
<tr>
<td>$9 + 3$</td>
<td>$5 + 4$</td>
<td>$6 + 5$</td>
<td>$1 + 8$</td>
</tr>
</tbody>
</table>
Use fractions to describe the pictures.

1. Divide these shapes into:
   Halves
   - Triangle
   - Rectangle
   - Circle
   - Square

   Quarters
   - Rectangle
   - Circle
   - Square
   - Diamond

2. Colour in the following fractions.
   a. two quarters \( \frac{2}{4} \) =
   b. one quarter \( \frac{1}{4} \) =
   c. two thirds \( \frac{2}{3} \) =
   d. two halves \( \frac{2}{2} \) =
   e. three thirds \( \frac{3}{3} \) =
3. Complete the table below.

<table>
<thead>
<tr>
<th>Fraction circle</th>
<th>Fraction that is green.</th>
<th>Colour the same fraction on this diagram.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>one quarter ( \frac{1}{4} )</td>
<td>one quarter ( \frac{1}{4} ) is green</td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fractions dice and strips**

Throw a dice.
Then take a fraction strip from Cut-out 4 that matches the fraction on the face of the dice.
If the face is \( \frac{1}{4} \), take a quarter strip. If you are correct keep the fraction strip.
At the end count your fraction strips.
The winner is the person with the most fractions strips.
More Fractions

Use fractions to describe the pictures.

\[ \begin{align*}
\text{Children} & \quad \text{Total number of sweets} & \quad \text{What fraction will each child get?} & \quad \text{How many sweets will each child get?} \\
\text{1} & \quad \text{2} & \quad \text{3} & \quad \text{4} \\
\end{align*} \]

1. Share the sweets. What fraction will each child get?

**Children**

- One quarter
- One quarter
- One quarter
- One quarter
2. You divide 16 sweets between four children. What fraction will each child get?

3. You divide 18 sweets between two children. What fraction will each get?

4. Four children each get \( \frac{1}{4} \) of 28 sweets. How many sweets does each child get?
Identify all the coins and notes:

1. Tick the coins that are equal to the amount shown:
   a. R5,40
   b. R3,20
   c. R7,50
   d. R9,45

2. Colour the blocks:
   a. R2 = Green
   b. R1 = Blue
   c. R5 = Red
   d. R10 = Purple
   e. R20 = Yellow
3. **Tick the correct change.**


b. I bought sweets for R4,89. I paid with a R5,00.


d. I bought sweets for 910c. I paid with R10,00.

---

**Coin rubbing and problem solving**

a. **Take some coins.**

   Make a coin rubbing by putting a coin under a piece of paper and rubbing over the top with a crayon/pencil. Cut out the coins and make five of your own sums.

b. Grandmother gives Palesa R12. Palesa wants to save a third of the money. How much money must she save?
How long is a metre? Can you take a step that is one metre long? How many 30 cm rulers will make 1 metre?

1. If this worm is one metre long, what is the distance from the boy to the girl?

   ![Diagram of children and measurements]

   a. 
   b. 
   c. 
   d. 
   e. 

2. Fill in the missing numbers on this measured line.

   ![Measured line with missing numbers]
3. Use the game board to answer the questions:

We have already rolled the dice for you. The length of the line is the number of spaces you moved. We did the first two for you, E=1 and D = 2, so you are standing on square 3 now. Carry on. Colour the blocks as you go. The first one to finish wins.

Spaces moved: 1
metres moved: 1

Spaces moved: 2 + 1
metres moved: 3

Spaces moved: 
metres moved: 

Spaces moved: 
metres moved: 

Spaces moved: 
metres moved: 

Spaces moved: 
metres moved: 

How many more spaces must you move to get to the finish?
Look at the kitchen floor. How many tiles did I use to tile the floor?

1. Answer the following questions:
   a. How many tiles did you use to tile the kitchen floor? _______
   b. How many white tiles did you use to tile the kitchen floor? _______
   c. How many black tiles did you use to tile the kitchen floor? _______
   d. The girl takes one step per tile. How many steps will she take to go round the edges of the room on the tiles? _______

2. a. How many tiles are used to tile these floors?
   b. What is the distance in tiles around the edges of each floor?

   a. _______  b. _______
   
   a. _______  b. _______

   a. _______  b. _______
   
   a. _______  b. _______
3. Use Cut-out 5. You also need glue and a pair of scissors. Tile all the floors. Try and create a beautiful pattern with your tiles.

How many whole tiles from Cut-out 5 will fit on a sheet of A4 size paper?

<table>
<thead>
<tr>
<th></th>
<th>Total tiles:</th>
<th>Total distance (in tiles) around the floor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This bottle holds 1 litre.

Identify the objects in the kitchen that can hold more or less than 1 litre.

1. Answer the following questions:

   a. What can take more water than a cup?
   b. Is this container full or empty?
   c. Is this bottle full or empty?
   d. Which container can take more water?
   e. Is this container full or half full?
   f. Is this bottle full?

2. Use the bottle on the left, and estimate whether the container can take more or less than a litre.
3. How many bottles of water did you take to fill each measuring jug? The picture on the left will guide you.

4. If each jug takes 3 litres of water, how many litres of water are there in each jug?

Make a list of 10 things in your house that have a capacity of 1 litre.
How many shapes and objects can you find?

Words that can help:
- Rectangle
- Circle
- Square
- Triangle
- Box (Prism)
- Ball (Sphere)
- Cylinder

1. Name the following shapes:
   a. 
   b. 
   c. 
   d. 

2. Name the following objects:
   a. 
   b. 
   c. 

3. Colour the correct word or words.
   a. Straight edges  Curved edges
   b. Straight edges  Curved edges
   c. Round surfaces  Flat surfaces
   d. Round surfaces  Flat surfaces
4. Draw a line of symmetry.
   a. 
   b. 
   c. 

5. Colour all the cylinders blue. Then write on each object if it can:
   - Roll only (R)
   - Slide only (S)
   - Roll and Slide (RS)

What to do:
- Go through a magazine, newspaper or an advertisement.
- Find pictures of five things that look like a:
  - cylinder
  - cube
  - ball (sphere)

Which object was the easiest to find?
Which object was the most difficult to find?
Did you know that an average pineapple weighs 1 kg? Identify the objects in the kitchen that are heavier or lighter than a pineapple.

1. Answer the questions.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. What is lighter than a brick?</td>
<td>b. What is heavier, a full or an empty bag?</td>
</tr>
<tr>
<td>c. Is this bag heavier or lighter than a pineapple?</td>
<td>d. Are the biscuits heavier or lighter than the handbag?</td>
</tr>
<tr>
<td>e. Is this bag heavy or light?</td>
<td>f. Is this suitcase heavy or light?</td>
</tr>
</tbody>
</table>

2. Use the object on the left to estimate whether the object is heavier or lighter than a kilogram.

a. feather  b. shoes  c. cupcake  d. crayon

1 kg  e. school bag  f. pencil case  g. packet of chips
3. Say if the object (or objects) weigh more, less or the same as 1 kilogram.

What to do:
- Make a list of 10 things in your house that weigh about 1 kilogram each.
1. Sort the fruit using the circles below. Make drawings:

naartjies

apples

bananas

strawberries

a. How many naartjies are there? __________

b. How many apples are there? __________

c. How many bananas are there? __________

d. How many strawberries are there? __________
2. Draw a pictograph.

Our favourite fruit

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>Banana</td>
<td>Strawberry</td>
<td>Grape</td>
</tr>
</tbody>
</table>

a. Do children like bananas or apples more?  

b. Do children like strawberries or naartjies more?  

c. What is the most popular fruit?  

d. What is the least popular fruit?  

Find a graph

Search through a newspaper for graphs. Bring one example of a graph to the classroom.
Mathematics

Grade 4

Worksheets 1 to 64

Part 2

English

Book 1
How many cubes are there in total?

1. Count the cubes.

a.

b.
2. How many cubes are there in total?

\[ \begin{align*}
&= 1 \\
&= 10 \\
&= 100 \\
&= 1000
\end{align*} \]

a.

b.

How many of the 100 blocks will make a 1000 block?
Numbers 0 to 1000 continued

d.

e.
3. Match column A with column B

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [image]</td>
<td>100</td>
</tr>
<tr>
<td>b. [image]</td>
<td>1</td>
</tr>
<tr>
<td>c. [image]</td>
<td>10</td>
</tr>
<tr>
<td>d. [image]</td>
<td>1000</td>
</tr>
</tbody>
</table>

4. Calculate the following:

| a. 10 + 1 = 11     |
| b. 10 + 100 + 1 = 111 |
| c. 100 + 100 + 100 + 10 + 10 + 1 + 1 = |
| d. 1 + 1 + 1 + 10 + 10 + 10 + 10 + 10 + 100 = |
| e. 10 + 10 + 10 + 100 + 100 + 100 + 100 + 1 = |

How quick are you?

What you need:
- Cut-out 1.

What to do:
- Play in pairs.
- Cut out the cards from the back of your books.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- See who can give the total the quickest.
- Add 100 to your answer.
- Check your partner’s answer.
- Do the same with 6/7/8/9/10 cards. Remember to add 100.
- The person with the most correct answers is the winner.
What number will these cards make?

700
90
8

Seven hundred and ninety-eight

1. Complete the following:
   a. 600 + 40 + 3 = ________________
   b. 300 + 80 + 5 = ________________
   c. 400 + 10 + 9 = ________________
   d. 100 + 20 = ________________
   e. 800 + 6 = ________________

2. Complete the following:
   a. 100 + 60 + 4 = ________________
   b. 200 + 10 + 8 = ________________
   c. 900 + 90 + 9 = ________________
   d. 600 + 20 = ________________
   e. 700 + 7 = ________________

3. Write the number in the correct column:

<table>
<thead>
<tr>
<th></th>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>923</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>b.</td>
<td>113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>580</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. You need some coloured pencils to complete this question.
Complete the following using the first question to guide you.

- 247 = \text{2 hundreds + 4 tens + 7 units}
- 892 = ___________________________
- 384 = ___________________________
- 566 = ___________________________
- 201 = ___________________________

5. Complete the table below:

<table>
<thead>
<tr>
<th></th>
<th>Expanded notation</th>
<th>Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>493</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>187</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>349</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>420</td>
<td></td>
</tr>
</tbody>
</table>

6. What is the value of the underlined digit?

- 891 = ___________________________
- 320 = ___________________________
- 554 = ___________________________
- 632 = ___________________________
- 047 = ___________________________

Find the number.

What to do:
- Bring a newspaper to class.
- Find five 3-digit numbers.
- Write them down.
- Share with the class what each number means.

What you need:
- A newspaper
Even more numbers 0 to 1000

Choose a colour on the left. Find the matching colour on the right. Choose 5 numbers smaller and 5 numbers bigger than the number (where possible).

1. Arrange the numbers from the smallest to the biggest.
   a. 896, 689, 888, 698, 986
   b. 426, 626, 642, 264, 269
   c. 735, 365, 373, 335, 533
   d. 400, 404, 304, 340, 430
   e. 999, 292, 922, 902, 920

2. Fill in < or >.
   a. 623 __________ 263
   b. 196 __________ 916
   c. 505 __________ 500
   d. 334 __________ 344
   e. 829 __________ 892

3. What is the value of the digit 4 in these numbers?
   a. 964 __________
   b. 204 __________
   c. 468 __________
   d. 459 __________
   e. 341 __________
4. Complete the following:  

\[825\]

a. Use each digit once. Make the smallest 3-digit number: 

b. Use each digit once. Make the largest 3-digit number: 

c. You can use a digit twice. Make the smallest 3-digit number: 

d. You can use a digit twice. Make the largest 3-digit number: 

5. Complete the following: 

You tossed some stones on a game board. This were your result. If you add the numbers, what is the total?

Who can get the largest number?

What you need:
- The game board on the right.
- Small stones.

What to do:
- Toss your stone on the board.
- Write down the number it lands on.
- Do this ten times.
- Add the numbers.
- The winner in a group is the person with the biggest number.
Look at the symbols below and describe them.

When we want to write 4 + 5 is equal to 9, we use the symbol =.

When we want to write 8 rounded off to the nearest 10 we use the symbol \(\approx\).

Rounding off to the nearest ten.

Round off the numbers that end in a digit from 1 to 4 to the previous (lower) ten.
Example: 374 rounded off to the nearest ten would be 370.

Round off numbers that end in a digit from 5 to 9 to the next (higher) ten.
Example: 377 rounded off to the nearest ten would be 380.

1. Round the following numbers off to the nearest ten using the number lines provided.

   a. \(8 \approx \)

   b. \(3 \approx \)

   c. \(2 \approx \)

   d. \(9 \approx \)

   e. \(4 \approx \)
2. Round the following numbers off to the nearest ten using the number lines provided.
   a. 35 ≈ 
   b. 73 ≈ 
   c. 97 ≈ 

3. Round the following numbers off to the nearest hundred using the number lines.
   a. 530 ≈ 
   b. 880 ≈ 
   c. 360 ≈ 

Round up and down
Round off each of these to the nearest 10.
### Rounding off to the nearest hundred.

Round off the numbers that start with a digit from 1 to 4 to the previous (lower) hundred. Example: 40 rounded off to the nearest hundred would be 0.

Round off numbers that end in a digit from 5 to 9 to the next (higher) hundred. Example: 70 rounded off to the nearest hundred would be 100.

<table>
<thead>
<tr>
<th>Number</th>
<th>Rounded Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>1210</td>
<td>1200</td>
</tr>
<tr>
<td>1220</td>
<td>1200</td>
</tr>
<tr>
<td>1230</td>
<td>1200</td>
</tr>
<tr>
<td>1240</td>
<td>1200</td>
</tr>
<tr>
<td>1250</td>
<td>1200</td>
</tr>
<tr>
<td>1260</td>
<td>1200</td>
</tr>
<tr>
<td>1270</td>
<td>1200</td>
</tr>
<tr>
<td>1280</td>
<td>1200</td>
</tr>
<tr>
<td>1290</td>
<td>1200</td>
</tr>
<tr>
<td>1300</td>
<td>1300</td>
</tr>
</tbody>
</table>

1. **Round the following numbers off to the nearest hundred using the number lines provided.**
   - a. 1280 ≈ 1200
   - b. 1230 ≈ 1200
   - c. 1240 ≈ 1200
   - d. 1250 ≈ 1200
   - e. 1256 ≈ 1200

---

**Look at the symbols below and describe them.**

- **When we want to write 30 + 60 is equal to 90, we use the symbol**\[=\]
- **When we want to write 60 rounded off to the nearest 100 we use the symbol**\[≈\]
2. Round the following numbers off to the nearest hundred using the number lines provided.

   a. 1550 ≈ 
   
   b. 1830 ≈ 
   
   c. 949 ≈ 

3. Round the following numbers off to the nearest hundred using the number lines provided.

   a. 1630 ≈ 
   
   b. 1760 ≈ 
   
   c. 1360 ≈ 

Rounding off

- Round each off to the nearest 100.
1. Fill in the missing number.
   
   a. $3 + 7 = \underline{10}$
   b. $8 + \underline{12} = 10$
   c. $3 + \underline{17} = 10$
   d. $10 - \underline{6} = 4$

2. Fill in the missing number.
   
   a. $13 + 7 = \underline{20}$
   b. $8 + \underline{12} = 20$
   c. $3 + \underline{17} = 20$
   d. $20 - \underline{16} = 4$

3. Fill in the missing number.
   
   a. $230 + 70 = \underline{300}$
   b. $240 + 60 = \underline{300}$
   c. $240 + \underline{60} = 300$
   d. $230 + \underline{30} = 300$

4. Fill in the missing number.
   
   a. $130 + 170 = \underline{300}$
   b. $140 + \underline{160} = 300$
   c. $130 + \underline{160} = 300$
   d. $300 - \underline{140} = 160$
5. Calculate the following:

Example:

\[
\begin{align*}
58 - 58 &= 0 \\
264 - 264 &= 0 \\
304 - 0 &= 304
\end{align*}
\]

When you subtract a number from itself you get zero.

a. \(46 - 46 = \)  

b. \( \_ - \_ = 0 \)

c. \(165 - \_ = 165 \)

d. \(37 - 4 + 4 = \)  

e. \(27 + 6 - 6 = \)

6. Calculate and show on a number line.

Example:

\[
\begin{align*}
7 + 5 &= 12 \\
\text{therefore } 12 - 5 &= 7
\end{align*}
\]

You can use addition to check subtraction.

a. \(8 + 3 = \)  

\[\text{therefore } 11 - 3 = \]

7. Calculate the following:

a. \(47 + 22 = \)  

\[\text{therefore } \_ - 22 = \]

b. \(56 + 31 = \)  

\[\text{therefore } \_ - \_ = \]
8. Complete the equations.

a. $13 + 46 = \underline{\hspace{2cm}}$ or $46 + 13 = \underline{\hspace{2cm}}$

b. $36 + 297 = \underline{\hspace{2cm}}$ or $297 + 36 = \underline{\hspace{2cm}}$

c. $27 + 94 = \underline{\hspace{2cm}}$ or $94 + 27 = \underline{\hspace{2cm}}$

d. $12 + 15 = 15 + \underline{\hspace{2cm}}$

e. $\underline{\hspace{2cm}} + 6 = \underline{\hspace{2cm}} + 7$

f. $125 + 164 = 164 + \underline{\hspace{2cm}}$

g. $89 + 46 = 46 + \underline{\hspace{2cm}}$

h. $\underline{\hspace{2cm}} + 49 = \underline{\hspace{2cm}} + 36$

i. $174 + 132 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

j. $56 - 14 = \underline{\hspace{2cm}} + 42$

9. Calculate the following:

a. $(3 + 2) + 1 = \underline{\hspace{2cm}}$ is the same as $3 + (2 + 1) = \underline{\hspace{2cm}}$

b. $(31 + 26) + 19 = \underline{\hspace{2cm}}$ is the same as $31 + (26 + 19) = \underline{\hspace{2cm}}$

c. $51 + (13 + 49) = \underline{\hspace{2cm}}$ is the same as $(51 + 13) + 49 = \underline{\hspace{2cm}}$

d. $(4 + 3) + 2 = \underline{\hspace{2cm}} + (3 + 2)$

e. $(9 + 6) + 5 = 9 + (\underline{\hspace{2cm}} + 5)$

f. $4 + (2 + 7) = (\underline{\hspace{2cm}} + \underline{\hspace{2cm}} ) + 7$

g. $(8 + 1) + 4 = \underline{\hspace{2cm}} + (1 + 4)$

h. $7 + (4 + 2) = (\underline{\hspace{2cm}} + \underline{\hspace{2cm}} ) + 2$

i. $(11 + 3) + 2 = 11 + (\underline{\hspace{2cm}} + 2)$
10. Say if the following are true or false.

a. $9 + 8 = 8 + 9$
   True

b. $3 + 6 = 6 - 3$

c. $7 - 4 = 4 - 7$

d. $10 - 5 = 5 + 10$

e. $8 + 3 = 3 - 8$

f. $15 - 10 = 10 - 15$

g. $4 + 6 = 6 + 4$

h. $4 - 6 = 6 + 4$

i. $4 - 6 = 6 - 4$

j. $4 + 6 = 6 - 4$

k. $2 + (4 + 6) = (2 + 4) + 6$

Number problems

a. You have 40 marbles in a bag. Write down all the number sentences that will give you an answer of 40. You should only add two numbers every time.

b. What will happen if I take any two numbers that are the same, and subtract the one from the other?
### What is the difference between the numbers?

<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>1</td>
<td>11</td>
<td>21</td>
<td>31</td>
<td>41</td>
<td>51</td>
<td>61</td>
<td>71</td>
<td>81</td>
<td>91</td>
<td>101</td>
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<td>2</td>
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<td>140</td>
<td>150</td>
<td>160</td>
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<td>180</td>
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<tr>
<td>3</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
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<td>800</td>
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</tr>
<tr>
<td>4</td>
<td>90</td>
<td>190</td>
<td>290</td>
<td>390</td>
<td>490</td>
<td>590</td>
<td>690</td>
<td>790</td>
<td>890</td>
<td>990</td>
</tr>
</tbody>
</table>

### 1. What number comes next?

- **a.** 8, 9, 10, __________
- **b.** 20, 30, 40, __________
- **c.** 55, 65, 75, __________
- **d.** 95, 195, 295, __________
- **e.** 645, 745, 845, __________
- **f.** 912, 922, 932 __________

### 2. Complete the table: Add to the given number.

<table>
<thead>
<tr>
<th>Number</th>
<th>Add 100</th>
<th>Add 10</th>
<th>Add 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>233</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>478</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>399</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>862</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Fill in the missing number:
   a. 3 + [ ] = 10
   b. 17 + [ ] = 20
   c. 90 + [ ] = 100
   d. 85 + [ ] = 100
   e. 78 + [ ] = 100
   f. 325 + [ ] = 350
   g. 312 + [ ] = 400
   h. 350 + [ ] = 525
   i. 238 + [ ] = 400
   j. 564 + [ ] = 800

4. Complete the table.

<table>
<thead>
<tr>
<th>Number</th>
<th>Complete up to the next 10.</th>
<th>Complete up to the next 100.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 35</td>
<td>35 + [□] = 40</td>
<td>35 + [6□] = 100</td>
</tr>
<tr>
<td>b. 265</td>
<td>265 + [□] = 270</td>
<td>265 + [□] = 300</td>
</tr>
<tr>
<td>c. 342</td>
<td>342 + [□] = 350</td>
<td>342 + [□] = 400</td>
</tr>
<tr>
<td>d. 486</td>
<td>486 + [□] = 490</td>
<td>486 + [□] = 500</td>
</tr>
<tr>
<td>e. 964</td>
<td>964 + [□] = [□]</td>
<td>964 + [□] = [□]</td>
</tr>
</tbody>
</table>

continued
Addition up to 4 digits continued

Examples:
Example 1:
134 + 123

\[
\begin{array}{ccc}
100 & 30 & 4 \\
+ & 100 & 20 & 3 \\
\end{array}
\]

= 100 + 100 + 30 + 20 + 4 + 3
= 200 + 50 + 7
= 257

Example 2:
468 + 274

\[
\begin{array}{ccc}
400 & 60 & 8 \\
+ & 200 & 70 & 4 \\
\end{array}
\]

= 400 + 200 + 60 + 70 + 8 + 4
= 600 + 130 + 12
= 600 + 100 + 30 + 10 + 2
= 700 + 40 + 2
= 742

5. Use both methods above to calculate the following.

a. 644 + 120

\[
\begin{array}{ccc}
600 & 40 & 4 \\
+ & 100 & 20 & 0 \\
\end{array}
\]

= 600 + 100 + 40 + 20 + 4
= 
= 

b. 143 + 152

\[
\begin{array}{ccc}
100 & 40 & 3 \\
+ & 100 & 50 & 2 \\
\end{array}
\]

= 
= 
= 

20
5. Use both methods above to calculate the following.

**What is the size of your number?**

**What you need:**
- Use the 10s, and 100s dice you made before.
- Piece of paper.

**What to do:**
- Individual game against a group or the class.
- Roll the 10s dice.
- Add the number landed on, to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the 2nd to the 5th number.

**c. 394 + 468**

```
  +  +  +  +  
= 
= 
= 
= 
= 
```

**d. 1 268 + 324**

```
  +  +  +  +  
= 
= 
= 
= 
= 
```

**e. 2 374 + 1 287**

```
  +  +  +  +  
= 
= 
= 
= 
= 
```

115 127 138 149 192
How fast can you answer this?

- **Add** $800 + 30 + 5$.
- What is the **sum** of 300 and 400?
- How many do 100 and 500 make **altogether**?
- What three numbers have a **total** of 200?
- Add 25 and 18.
- What is the **sum** of 100 and 52?
- How many **altogether** are 42 and 59?
- Which three numbers have a **total** of 80?

1. Solve the following problems. The pictures may guide you. Also use the blue word.
   a. A juice company has 260 apples. They get another 250 apples. How many apples do they have now?

   \[ 200 + 200 + \phantom{0} + 50 \]
   \[ = \phantom{0} \]
   \[ = \phantom{0} \]
   \[ = \phantom{0} \]
   \[ = \phantom{0} \]

   Try to form a picture in your mind. These are the number of apples.
b. Mandla had 975 oranges. He bought another 155 oranges. How many oranges does he have?
   i. What picture do you see when you think about this problem? Draw it.
   
   ii. What operation should you use?
   
   iii. Solve the problem. Write it down in your writing book.

   Continue on an extra sheet of paper.

   c. Our class collected 421 empty plastic bottles to recycle. The other class collected 375 bottles. How many empty plastic bottles did the two classes collect altogether?

   Continue on an extra sheet of paper.
2. Look at the pictures below and write an interesting addition word sum.

Continue on an extra sheet of paper.
3. Write an appropriate and interesting word sum for: 439 and 514. Solve it.

<table>
<thead>
<tr>
<th>Counting houses …</th>
</tr>
</thead>
<tbody>
<tr>
<td>There were 700 + 10 + 4 houses in Extension 4. Then</td>
</tr>
<tr>
<td>400 + 80 + 9 extra houses were built in Extension 4.</td>
</tr>
<tr>
<td>How many houses are there now in Extension 4?</td>
</tr>
</tbody>
</table>

Continue on an extra sheet of paper.
### What is the difference between the numbers?

<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>18</td>
<td>28</td>
<td>38</td>
<td>48</td>
<td>58</td>
<td>68</td>
<td>78</td>
<td>88</td>
<td>98</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>990</td>
<td>1990</td>
<td>2990</td>
<td>3990</td>
<td>4990</td>
<td>5990</td>
<td>6990</td>
<td>7990</td>
<td>8990</td>
<td>9990</td>
<td></td>
</tr>
</tbody>
</table>

### 1. What number comes next?

- a. 5, 6, 7, ____________
- b. 10, 20, 30, ____________
- c. 135, 235, 335, ____________
- d. 284, 294, 304, ____________
- e. 416, 516, 616, ____________
- f. 574, 674, 774, ____________

### 2. Complete the table: Subtract from the given number.

<table>
<thead>
<tr>
<th>Number</th>
<th>Subtract 1</th>
<th>Subtract 10</th>
<th>Subtract 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>367</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>519</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>893</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Fill in the missing number:

a. 4 – _____ = 0

b. 13 – _____ = 10

c. 75 – _____ = 70

d. 72 – _____ = 70

e. 113 – _____ = 100

f. 140 – _____ = 100

g. 341 – _____ = 300

h. 945 – _____ = 800

i. 864 – _____ = 800

j. 985 – _____ = 850
**Subtraction continued**

**Example:**

\[ 913 - 458 \]

\[
\begin{align*}
\text{900} & \quad \text{10} & \quad \text{3} & \quad \text{400} & \quad \text{50} & \quad \text{8} \\
\end{align*}
\]

\[ = (900 - 400) + (10 - 50) + (3 - 8) \]
\[ = (500) + (0 - 50) + (13 - 8) \]
\[ = 400 + 50 + 5 \]
\[ = 455 \]

4. Complete the following using the method above:

a. \[ 798 - 164 \]

\[ = (700 - 100) + (90 - 60) + (8 - 4) \]

= 

b. \[ 929 - 174 \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

c. \[ 946 - 597 \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

d. \[ 2683 - 1241 \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

e. \[ 4384 - 3872 \]

\[ = \]

\[ = \]

\[ = \]

\[ = \]

**What is the size of your number?**

**What you need:**
- Use the 10s and 100s dice previously made.
- Piece of paper.

**What to do:**
- Individual game against a group or the class.
- Roll the 10s dice.
- Subtract the number landed on, to the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Repeat the activity with the 100s and 1 000s dice.
- Learners check each other’s subtraction sums.
- The winner is the person with the most correct answers.
### Subtraction Problems

#### How fast can you answer these?
- Subtract 7 000 from 8 000.
- What is the difference between 650 and 370?
- Minus 700 and 85.
- Decrease 100,000 by 10,000.
- Subtract 9 000 and 820.
- Reduce 755 by 102.
- Take 150 from 1 003.
- Take away 37 from 2 000.

#### 1. Solve the following problems. The pictures may guide you. Also use the blue word.

a. Our school bought 420 pencils. We used 180 pencils. How many pencils are left?

```
420 - 180
= 240
```

b. Mpo is selling pencils. She had 800 pencils. She sold 257 pencils. How many pencils does she have left?

- What picture do you see when you think about this problem? Draw it.
- What operation should you use?
- Solve the problem. Write it down in your workbook.

---

Continue on an extra sheet of paper.
2. There were 785 apples at the fruit shop. They sold 453. How many apples were left?

3. Write an appropriate and interesting subtraction word sum for: 723 and 189. Solve it.

Your own story:

Look at the picture and make your own subtraction story.

Continue on an extra sheet of paper.
Addition and subtraction problems

How fast can you answer these?
- Add 500 and 90.
- Subtract 70 from 300.
- 400 plus 46 is ....
- The sum of 350 and 420 is ....
- Take 500 from 800.
- Decrease 950 by 230.
- Increase 150 by 370.
- 225 and 385 are ....

Use the colours to help you to solve the word sums.

1. Complete the table below:

<table>
<thead>
<tr>
<th></th>
<th>Add 80</th>
<th>Subtract 40</th>
<th>Add 200</th>
<th>Subtract 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>420</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>510</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>690</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>730</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>555</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Answer the following questions:
   a. What is the opposite of + ?
   b. What is the opposite of – ?

3. Calculate the following. Do the calculations in your workbook.
   a. 452 + 336 =
   b. 289 + 574 =
   c. 967 – 153 =
   d. 710 – 538 =

4. Check your answers for each of the above calculations, using the opposite operation.

Continue on an extra sheet of paper.

Term 1
Addition and subtraction problems continued

5. Solve the following problems:
   a. Thabo and his sisters were counting animals and birds at the zoo. Thabo counted 234 animals, his sister, Susan counted 1 004 birds, and their younger sister, Lindy, counted 538 animals.
      i. How many animals and birds did they count all together?
      ii. The guide told them that they could expect to see 2 000 animals and birds. How many animals did they not see?

   b. The book store bought 1 200 new books and there were already 1 250 on the shelves. They were all put on sale and 1 625 books were sold.
      i. How many books were on the shelves before the sale?
      ii. How many books were left after the sale?
      iii. If the bookshop sells another 500 books, how many books are left?

---

Coloured numbers

What to do:
- Play in pairs.
  - The first player will say: 'Add green numbers'.
  - The second player can take any two green numbers and add them. If the player is correct, he or she will get one point.
  - The second player will say: 'Subtract yellow numbers'. The first player makes a subtraction sum with any two yellow numbers.
  - Carry on playing. The first person with a score of 10 is the winner.

<table>
<thead>
<tr>
<th>Green Numbers</th>
<th>Yellow Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>500</td>
</tr>
<tr>
<td>10</td>
<td>450</td>
</tr>
<tr>
<td>325</td>
<td>250</td>
</tr>
<tr>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>75</td>
<td>800</td>
</tr>
<tr>
<td>45</td>
<td>20</td>
</tr>
<tr>
<td>120</td>
<td>350</td>
</tr>
<tr>
<td>700</td>
<td>400</td>
</tr>
</tbody>
</table>
Let’s talk about money

Talk about money. Look at the picture and make your own story.

1. Colour the combination that will give you:
   a. R5
   b. R2
   c. R1
   d. R1,50
   e. R1,75

2. How much money will I have if I save the following amounts?
   a. R2 + R1 =
   b. R5 + R20 =
   c. R10 + 20c =
   d. R20 + 50c =
   e. R1 + 5c =

3. How much money will I have left if I spend the following amounts:
   a. R5 – R2 =
   b. R15 – 50c =
   c. 50c – 2c =
   d. R12 – R1,50c =
   e. R5 – 0,70c =

4. Calculate the following:
   a. R12 + R2 – R5 =
   b. R2,50 + 50c – 20c =
   c. R15 + 5c – 20c =
   d. R5 + R1 – R2 =
   e. R7,25 – R1,05 + 20c =

5. How many combinations can you make to get R1,00?

Continue on an extra sheet of paper.

Big five….

What do the big five and money notes have in common?

What does it mean if I pay with “buffaloes”?

Continue on an extra sheet of paper.
Number patterns

1. Complete the flow diagrams.

2. Extend the following patterns:
   a. 6, 8, 10, ______, ______, ______
   b. 12, 15, 18, ______, ______, ______
   c. 30, 35, 40, ______, ______, ______
   d. 80, 70, 60, ______, ______, ______
   e. 4, 7, 10, ______, ______, ______
   f. 12, 18, 24, ______, ______, ______
   g. 31, 29, 27, ______, ______, ______
   h. 10, 14, 18, ______, ______, ______
   i. 49, 44, 39, ______, ______, ______
   j. 29, 26, 23, ______, ______, ______

3. Identify the rule in each case.
   a. 44, 49, 54, 59
   b. 67, 77, 87, 97
   c. 65, 68, 71, 74
   d. 92, 89, 86, 83

4. Patterns are shown here. Explain each one in words.

5. Identify the pattern on each number board. Extend each pattern by five more numbers.

6. Describe the pattern. Extend the pattern by five more numbers.

Example:
   i. Count forwards in 2s
   ii. 121, 123, 125, 127, 129
Number patterns: flow diagrams and tables

Look at the robot. What is it telling us? Complete the table.

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
</tr>
</tbody>
</table>

Example 1:

<table>
<thead>
<tr>
<th>Input</th>
<th>Rule</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>× 3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>× 2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>× 1</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>× 4</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>× 5</td>
<td>25</td>
</tr>
</tbody>
</table>

Example 2:

<table>
<thead>
<tr>
<th>Input</th>
<th>Rule</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>× 3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>× 4</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>× 5</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>× 6</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>× 7</td>
<td>35</td>
</tr>
</tbody>
</table>

1. Complete and label the flow diagrams.

a.

b.

c.

d.

e.

f.

Example:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
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<td>9</td>
<td>54</td>
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<tr>
<td>10</td>
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</tr>
</tbody>
</table>

Rule:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>9</td>
<td>18</td>
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<tr>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

2. Complete and label the following tables:

Example:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
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<tr>
<td>3</td>
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<td>18</td>
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<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

Rule:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
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<td>16</td>
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<tr>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

Number pattern problems

a. Write a number pattern for the following: I am counting in 3s. I start with an even number smaller than 3. What is my pattern?

b. My input numbers are 1, 2, 3, 4 and 5. My rule is x 10. What will my output numbers be?

c. My input numbers are 1, 3, 4, 5, 7. My rule is x 10 x 8. What will my output numbers be?
1. Write down repeated addition, multiplication and division sums for the following:

a. Four threes
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

b. 7 groups of 5
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

c. 4 tens
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

d. Two groups of 6
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

e. 5 packets of 5
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

f. Six bags of 3
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

2. Answer the following:
   a. Four threes
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

   b. 7 groups of 5
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

   c. 4 tens
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

   d. Two groups of 6
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

   e. 5 packets of 5
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

   f. Six bags of 3
   - Repeated addition: 2 + 2 + 2 = 6
   - Multiplication: 2 × 3 = 6
   - Division: 6 ÷ 3 = 2

3. Complete the sums and show the multiplication sum on the number line.
   a. 4 × [ ] = 16
   - Division: 16 ÷ 4 = [ ]

   b. 6 × [ ] = 24
   - Division: 24 ÷ 6 = [ ]

   c. 5 × [ ] = 20
   - Division: 20 ÷ 5 = [ ]

   d. 3 × [ ] = 12
   - Division: 12 ÷ 3 = [ ]

4. Fill in the answer.
   a. 2 × 3 = [ ]
   b. 2 × 2 × 5 = [ ]
   c. Double 4 × 2 = [ ]

   d. 3 × 2 × 3 = [ ]
   e. 4 × 2 × 2 = [ ]
   f. Double 5 × 2 = [ ]

5. Sweets and scores
   a. My friend has 8 sweets. I have twice as many. How many sweets do I have?
   b. I scored five times more than my friend. My friend’s score was four. How much did I score?
If a is 3 groups of 8. What will b and c be? Write down repeated addition, multiplication and division sums for the following:

1. Complete the following:
   a. \(1 \times 8 = \) \(2 \times 8 = \) \(3 \times 8 = \) \(4 \times 8 = \) \(5 \times 8 = \)
   b. \(6 \times 8 = \) \(7 \times 8 = \) \(8 \times 8 = \) \(9 \times 8 = \) \(10 \times 8 = \)
   c. \(16 \div 8 = \) \(32 \div 8 = \) \(48 \div 8 = \) \(56 \div 8 = \) \(64 \div 8 = \)
   d. \(27 \div 9 = \) \(36 \div 9 = \) \(45 \div 9 = \) \(54 \div 9 = \) \(63 \div 9 = \)

2. Complete the sums and show the multiplication sum on the number line.
   a. \(4 \times \square = 32\) \(32 \div 4 = \)
   b. \(6 \times \square = 48\) \(48 \div 6 = \)
   c. \(9 \times \square = 81\) \(81 \div 9 = \)

3. Complete the table.

<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>(\times 8)</td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

4. Fill in the answer.
   a. \(2 \times 8 = \)
   b. \(7 \times 9 = \)
   c. \(3 \times 2 \times 9 = \)
   d. \(1 \times 8 = \)
   e. \(3 \times 9 = \)
   f. \(2 \times 2 \times 2 \times 9 = \)
   g. \(3 \times 3 \times 8 = \)
   h. \(5 \times 8 = \)
   i. \(2 \times 2 \times 9 = \)

5. Answer the following:
   a. Eight 3s
   b. Four groups of 9
   c. Nine 10s
   d. 7 groups of 8
   e. Eight 9s
   f. Eight groups of 8

---

Spiders on a wall

There are five spiders sitting on the wall. How many legs do they have altogether?
1. Show the multiplication sum on the number lines.
   a. $4 \times 1 = \square$
   b. $4 \times 10 = \square$

2. Identify the patterns and describe each.

<table>
<thead>
<tr>
<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>
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<td>32</td>
<td>40</td>
<td>48</td>
<td>56</td>
<td>64</td>
<td>72</td>
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<td>9</td>
<td>9</td>
<td>18</td>
<td>27</td>
<td>36</td>
<td>45</td>
<td>54</td>
<td>63</td>
<td>72</td>
<td>81</td>
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<td>10</td>
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<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
</tbody>
</table>

3. Answer the questions:
   a. How fast can you calculate the answers?
   
   $1 \times 10 = \square$
   
   $6 \times 10 = \square$
   
   $9 \times 10 = \square$
   
   $3 \times 10 = \square$
   
   $10 \times 10 = \square$
   
   $9 \times 10 = \square$

   b. Find the missing number:
   
   $2 \times \square = 2$
   
   $2 \times \square = 20$
   
   $2 \times \square = 200$
   
   $4 \times \square = 8$
   
   $4 \times \square = 80$
   
   $2 \times \square = 800$
   
   $9 \times \square = 27$
   
   $9 \times \square = 270$
   
   $9 \times \square = 2700$

   c. What do you notice?
   ____________________________________________________

4. My father buys 60 bottles of juice at R6 each. How much did he pay altogether for the juice?

Example:
My mother bought 50 chocolate at R9 each. I help her to calculate the total cost. This is what I did in my head.

5 x R9 = R45
So 50 x R9 will give me R450

Loaves of bread
My mother bought 40 loaves of bread at R8 each. My father bought 20 loaves at R9 each. How much did they pay altogether for the bread?
What is the time? Give your answer in hours and minutes.

Term 1

1. Draw a line from the clock face to the digital clock with the same time.
   a. 
   b. 
   c. 
   d. 

2. Write the following as digital time.
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 
   g. 
   h. 
   i. 
   j. 

3. Write down in words the times shown on the clock:
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 
   g. 
   h. 

60 intervals – one for each minute in an hour

The hand moved 5 marks...

10 more marks.
4. Draw in the following times on the clocks:

- a. 1 o’clock
- b. 3 o’clock
- c. 8 o’clock
- d. 11 o’clock
- e. 3:45
- f. 15:20
- g. 9:30
- h. 10:40
- i. 22:10

5. What is the duration from clock 1 to clock 2?

- a. 
- b. 
- c. 
- d. 
- e. 
- f. 

6. I left home at 06:45 and arrived at school at 07:25. How long did it take me to get there?

- How many ...
  - hours do you sleep each night?
  - hours do you go to school each day?
  - minutes do you take to eat your lunch?
  - minutes do you take to get dressed in the morning?
1. Answer these questions on seconds, minutes and hours.
   a. The red hand on the clock shows us ________. 
   b. It takes ________ seconds to complete one circle.
   c. ________ seconds = 1 minute.
   d. The green hand on the clock shows us ________.
   e. It takes ________ minutes to complete one circle.
   f. ________ minutes = 1 hour.
   g. The blue hand on the clock shows us ________.
   h. It takes ________ hours to complete one circle.
   i. ________ hours = one day, ________ hours = ½ a day.
   j. If the red hand moves from 12 to 1, it moves ________ seconds.
   k. If the green hand moves from 12 to 2, it moves ________ minutes.
   l. If the blue hand move from 12 to 5, it moves ________ hours.

2. Complete the following:
   a. Minutes 1 2 3 4
      Seconds 60
   b. Hours 1 2 3 4
      Minutes
   c. Day 1 2 3 4
      Hours

3. Complete the questions on days, weeks, months and years.
   a. Complete the table below filling in the number of days in each month.
   b. Will February always have the same number of days? ________ Why or why not?
   c. Complete the table and then answer the questions below.

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Days left</td>
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</tr>
</tbody>
</table>

   i. How many months are there in a year? ________
   ii. How many days are there in a year? ________
   iii. Will we have the same number of days each year? ________

   Why or why not? ________

Calendar art

Make a calendar for the month of your birth.
Decorate it with a photograph or a drawing of yourself.
Give it to someone special.

Note that the number of days left depends on when you do this.
Calculation of time

1. Use the June and July calendar to fill in the table below.

<table>
<thead>
<tr>
<th>April 2015</th>
<th>Dates from ___ to ___</th>
<th>Number of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Mon Tues Wed Thurs Fri Sat</td>
<td>1 – 15 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 – 11 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 – 13 April</td>
<td></td>
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<tr>
<td></td>
<td>27 – 30 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 – 25 April</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>June 2015</th>
<th>Dates</th>
<th>Number of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Mon Tues Wed Thurs Fri Sat</td>
<td>1 – 15 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 – 11 April</td>
<td></td>
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<td>10 – 13 April</td>
<td></td>
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<tr>
<td></td>
<td>27 – 30 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 – 25 April</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>July 2015</th>
<th>Dates</th>
<th>Number of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Mon Tues Wed Thurs Fri Sat</td>
<td>5 – 6 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 – 9 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 – 13 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 – 14 April</td>
<td></td>
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<tr>
<td></td>
<td>19 – 21 April</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26 – 28 April</td>
<td></td>
</tr>
</tbody>
</table>

2. Look at the December calendar and answer the questions.

<table>
<thead>
<tr>
<th>December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>29</td>
</tr>
</tbody>
</table>

a. On what day is New Year’s Day?

b. What happens in South Africa if a public holiday is on a Sunday?

c. How many days is it from Christmas to New Year’s Day?

d. On what day did the school start this year? How many days ago was it?

3. Complete the calendar for the month your birthday is in.

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Dates from ___ to ___
Number of days
Name of starting day
What will the name of the next day after the last date be?

<table>
<thead>
<tr>
<th>Dates</th>
<th>Number of days</th>
<th>Name of starting day</th>
<th>What will the name of the next day after the last date be?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 25 June – 29 June</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 27 June – 2 July</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. 24 June – 1 July</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. 30 June – 3 July</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. 16 June – 2 August</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Count the days

How many days will it be from 23 February to 12 July? Will it be the same for every year?
Data

1. Complete the following:
   a. Write down your name. ____________________________
   b. How many letters do you have in your name? __________
   c. Write down a friend’s name. _________________________
   d. How many letters does her or his name have? __________

2. Use the table above to complete this table.

<table>
<thead>
<tr>
<th>Names with ___ letters</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>____</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

3. Answer the questions using your tally.
   a. How many children have 6 letters in their name?
      ____________________________
   b. How many children have 4 letters in their name?
      ____________________________
   c. How many children have 7 letters in their name?
      ____________________________
   d. How many children have 8 letters in their name?
      ____________________________
   e. What number of letters in a name is the most popular?
      ____________________________
   f. Do you know a nine or more letter name? Write it down.
      ____________________________
   g. Who in your class uses a shortened version of his or her name?
      ____________________________
   h. Why do you think people sometimes rather use a 3 letter name like Sam and not Samantha?
      ____________________________

Decode. What is my name?
22 25 18 15 14 19 3 1

Tally competition ...
In pairs see who can count the tallies the fastest.

Names in my class
- Peter
- Palesa
- Sue
- Thabo
- Jabu
- Gugu
- Jonathan
- Ann
- Musa
- Zander
- Liesel
- William
- Jolene
- Sipho
- Lucy
- Veronica
- John
- Lee
- Sam
- Nomsa
- Mpho
- Andile
- Steven
- Mdali
- Bongi
In our science class, our task was to go and search for insects in our gardens in order to see what insects there are at this time of year. I found the following in a section of 2 square metres in my garden: 10 rose beetles, one ladybird, three bees, two flies, nine ants and six caterpillars.

1. In the pictograph below, what does each **repent? How do you know?

2. Draw the key of this graph.

3. Draw a pictograph to represent the following information.

   Our class’s favorite food

<table>
<thead>
<tr>
<th>Hamburgers</th>
<th>Hotdogs</th>
<th>Pizzas</th>
<th>Pasta</th>
<th>Cooked meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>🍔</td>
<td>🍔</td>
<td>🍔</td>
<td>🍴</td>
<td>🍴</td>
</tr>
<tr>
<td>🍔</td>
<td>🍔</td>
<td>🍔</td>
<td>🍴</td>
<td>🍴</td>
</tr>
<tr>
<td>🍔</td>
<td>🍔</td>
<td>🍔</td>
<td>🍴</td>
<td>🍴</td>
</tr>
<tr>
<td>🍔</td>
<td>🍔</td>
<td>🍔</td>
<td>🍴</td>
<td>🍴</td>
</tr>
</tbody>
</table>
   KEY:

4. Based on the above graph:
   a. What time of year do you think it might be? (During which season(s) might certain insects be found generally?)

   b. If I looked in a section of 4 square metres, more or less how many of each kind of insect could I expect to find?

   c. Do you think I was looking at a patch of lawn or a flower bed? Why?

5. Suggest some data that would be easy and interesting to see/read in a pictograph (rather than in a bar graph).

6. Who might be interested in the graph you’ve suggested above, and why?
7. Every bar graph should have at least three labels. What are they?

8. What is this a graph of? How do you know?

9. Draw a bar graph of this information.
   Our class voted for our class representative on the LRC, and the following learners each got the following number of votes:
   Sipho: 8
   Nontobeko: 17
   Jannie: 5
   Faith: 10
   Shelly: 9

10. According to your graph:
    a. How many learners voted?
    b. Who won?
    c. Would you say that the winner won ‘by a landslide’ (by a big majority)? Explain your answer.
2-D shapes

A polygon is a shape formed by three or more straight lines. Identify the polygons.

A regular polygon has all its angles equal and all its sides of equal length.

Rectangle       Hexagon      Pentagon   Square  Triangle

1. Draw:
   a. A shape with only curved sides.
   b. A shape with straight and curved sides.
   c. A shape with straight sides only.

2. Say if the sides are curved, straight, or curved and straight.

3. Draw the following on the grid below:
   a. Triangle
   b. Quadrilateral
   c. Pentagon
   d. Hexagon

4. Can a shape have three straight sides and one curved side?

5. Name the shape and give the number of sides it has.
   a. A shape with only curved sides.
   b. A shape with straight and curved sides.
   c. A shape with straight sides only.
   d. A square (4 sides)
   e. A triangle (3 sides)
   f. A quadrilateral (4 sides)
   g. A pentagon (5 sides)
   h. A hexagon (6 sides)

6. Draw the following on the grid below:
   a. A shape with only curved sides.
   b. A shape with straight and curved sides.
   c. A shape with straight sides only.
7. Draw the following shapes. All their sides must be equal.
   a. triangle  
   b. square  
   c. pentagon  
   d. hexagon  
   e. quadrilateral  
   f. polygon of your choice

8. Draw a polygon with 10 equal sides.

9. Draw the following shapes. Their sides must be unequal.
   a. triangle  
   b. octagon  
   c. pentagon  
   d. hexagon  
   e. quadrilateral  
   f. polygon of your choice
Give the total of the numbers in each shape. Use multiplication.

1. Complete the table below.

<table>
<thead>
<tr>
<th>Number</th>
<th>x 10</th>
<th>x 20</th>
<th>x 30</th>
<th>x 40</th>
<th>x 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Find the multiples. The example below will help you to complete the other tables.

- **Multiples of 2**
  - The multiples of 2 are 2, 4, 6, 8, 10, 12.
  - The multiples of 2 are 2, 4, 6, 8, 10, 12.

- **Multiples of 3**
  - The multiples of 3 are 3, 6, 9.
  - The multiples of 3 are 3, 6, 9.

- **Multiples of 5**
  - The multiples of 5 are 5, 10, 15, 20, 25, 30.
  - The multiples of 5 are 5, 10, 15, 20, 25, 30.
**Sign:**

**Date:**

---

### Term 1

**Multiples of 10**

<table>
<thead>
<tr>
<th>10 x 1</th>
<th>10 x 2</th>
<th>10 x 3</th>
<th>10 x 4</th>
<th>10 x 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>20</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The multiples of 10 are ______, ______, ______, ______, ______.

### 3. Are these multiples of (extend the pattern):

- **a. 10?** 50, 60, 70, 80, ______, ______, ______, ______
- **b. 20?** 260, 280, 300, 320, ______, ______, ______, ______
- **c. 40?** 160, 200, 240, 280, ______, ______, ______, ______
- **d. 100?** 200, 300, 400, 500, ______, ______, ______, ______
- **e. 90?** 180, 270, 360, 450, ______, ______, ______, ______

### 4. Use the method below to calculate the multiplication sums. Write the steps in your workbook.

**Example:**

16 x 7

\[
\begin{array}{c}
10 + 6 \\
7 \\
\end{array}
\]

\[
\begin{array}{c}
10 x 7 \\
+ 6 x 7 \\
= 70 + 42 \\
= 112 \\
\end{array}
\]

**Example:**

- **a. 14 x 6**
- **b. 25 x 3**
- **c. 37 x 8**

### How fast are you?

**What to do:**
- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each colour number on the circle by the same colour rectangle's to get your answer.
### 1. How many groups are there?

<table>
<thead>
<tr>
<th>Groups of 10</th>
<th>Groups of 10</th>
<th>Groups of 10</th>
<th>Groups of 10</th>
<th>Groups of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Groups" /></td>
<td><img src="image2" alt="Groups" /></td>
<td><img src="image3" alt="Groups" /></td>
<td><img src="image4" alt="Groups" /></td>
<td><img src="image5" alt="Groups" /></td>
</tr>
</tbody>
</table>

**Addition sum:**
- 40

**Multiplication sum:**
- 400

**Division sum:**
- 20

### 2. Complete drawings and multiplication and division sums of the following:

<table>
<thead>
<tr>
<th>Groups</th>
<th>Multiplication sum</th>
<th>Division sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 groups of each</td>
<td>4 x 2 = 8</td>
<td>8 ÷ 2 = 4</td>
</tr>
<tr>
<td>4 groups of 10 each</td>
<td>4 x 20 = 80</td>
<td>80 ÷ 2 = 40</td>
</tr>
<tr>
<td>5 groups of 2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 groups of 2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 shared between 4</td>
<td>8 ÷ 2 = 4</td>
<td></td>
</tr>
<tr>
<td>8 shared between 4</td>
<td>8 ÷ 2 = 4</td>
<td></td>
</tr>
<tr>
<td>8 shared between 4</td>
<td>8 ÷ 2 = 4</td>
<td></td>
</tr>
<tr>
<td>40 shared between 4</td>
<td>40 ÷ 2 = 20</td>
<td></td>
</tr>
<tr>
<td>200 shared between 2</td>
<td>200 ÷ 100 = 2</td>
<td></td>
</tr>
<tr>
<td>600 shared between 6</td>
<td>600 ÷ 100 = 6</td>
<td></td>
</tr>
</tbody>
</table>
Example 1:
84 ÷ 4
Let us write it as 4 × \[\_] = 84
You can say 4 × 20 = 80. You still need 4
4 × 21 = 84
So 84 ÷ 4 = 21

Example 2:
75 ÷ 4
(70 ÷ 4) + (5 ÷ 4)
= (17 rem 2) + (5 ÷ 4)
= 17 + 1 rem 3
= 18 rem 3

4. Calculate the following:

a. 37 ÷ 3 =
b. 98 ÷ 5 =
c. 89 ÷ 4 =
d. 67 ÷ 5 =
e. 38 ÷ 3 =
f. 79 ÷ 6 =

Sweet money ...

a. I have 97 sweets. I need to divide it amongst 5 children. How many sweets will be left over?
b. I have R95. How many cup cakes of R8 can I buy? Will I get any change?
c. My mother bought 180 metres of fabric to make scatter cushions for 9 people. How much fabric will she have for each person?
Numbers 0 to 2 000

How many of these blocks do you need in order to get a total of 2 000 small cubes?

1. Complete the following:
   a. 1 000 + 500 + 90 + 3 =
   b. 1 000 + 900 + 10 + 6 =
   c. 1 000 + 200 + 9 =
   d. 1 000 + 30 + 5 =
   e. 1 000 + 2 =

2. Write the number in the correct column:

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Units</th>
</tr>
</thead>
</table>
   a. 1 234   |          |      |       |
   b. 948     |          |      |       |
   c. 1 028   |          |      |       |
   d. 1 607   |          |      |       |
   e. 1 060   |          |      |       |

3. Write the numbers in question 2 in words.

4. Complete the following using the first question to guide you.
   a. 1 456 = 1 thousand + 4 hundreds + 5 tens + 6 units
   b. 1 234 =
   c. 1 845 =
   d. 1 304 =
   e. 1 003 =

   1 000  1 000  1 000  1 000  1 000
   900   900   900   900   900
   30    30    30    30    30
   6     6     6     6     6
1. Arrange the numbers from the smallest to the biggest.

   a. 1231, 1213, 1312, 1132, 1123, ________________________
   b. 1945, 1549, 1559, 1954, 1459, ________________________
   c. 1436, 1346, 1634, 1364, 1654, ________________________
   d. 1050, 1005, 1500, 1505, 1055, ________________________
   e. 1414, 1441, 1411, 1144, 1444, ________________________

2. Fill in < or >.

   a. 589 ________________________ 598
   b. 948 ________________________ 849
   c. 1030 ________________________ 1003
   d. 1540 ________________________ 1504
   e. 1418 ________________________ 1518
   f. 1356 ________________________ 1299
   g. 1988 ________________________ 1898
   h. 1767 ________________________ 1766
   i. 1847 ________________________ 1784
   j. 1414 ________________________ 1441

3. What is the value of the underlined digit?

   a. 842 ________________________
   b. 1954 ________________________
   c. 1489 ________________________
   d. 1277 ________________________
   e. 1841 ________________________
   f. 1847 ________________________

4. Complete the following:

   a. Use each digit once, make the smallest 4-digit number: ________________________
   b. Use each digit once, make the largest 4-digit number: ________________________
   c. You can use one digit twice, make the smallest 4-digit number: ________________________
   d. You can use one digit twice, make the largest 4-digit number: ________________________

   Find the matching card and colour it the same colour. We did the first one for you.

   4 7 0 0
   4 7
   4 0 7
   4 0 0 7
   4 7 0
1. Complete the sentences and round the numbers off to the nearest ten using the number lines.

   a. 56 is closer to 60 than 50. So 56 rounded off to the nearest ten is ________.
   b. 136 is closer to ________ than ________. So 136 rounded off to the nearest ten is ________.
   c. 369 is closer to ________ than ________. So 369 rounded off to the nearest ten is ________.
   d. 284 is closer to ________ than ________. So 284 rounded off to the nearest ten is ________.

2. Round off each of the following numbers to the nearest 10:
   a) 15 = ________
   b) 431 = ________
   c) 19 627 = ________

3. Estimate the position of the arrow on the number line.

4. Circle the number which you look at when deciding whether to round up or down to the nearest 10. Underline the number which you look at to tell you what ten you will round up or down to.

   a) 15
   b) 431
   c) 19 627

5. Draw a circle around the number that will help you to round off to the nearest ten.

6. Draw a square around the number that will change when you round off to the nearest ten.

7. Create a picture which explains to somebody who does not understand the concept of “rounding off.” For example, if you are walking from ________ to ________, which place is closer?

8. Fill in the missing numbers in the number line.

9. More rounding off to the nearest 10:
   a) 0 10
   b) 160 170
   c) 2 130 2 140
1. Complete the sentences and round the numbers off to the nearest hundred using the number lines.

   a. 137 is closer to 100 than 200. So 137 rounded off to the nearest hundred is ___.

   

   b. 258 is closer to ___ than ___. So 258 rounded off to the nearest hundred is ___.

   

   c. 8 457 is closer to ___ than ___. So 8 457 rounded off to the nearest hundred is ___.

   

   d. 2 199 is closer to ___ than ___. So 2 199 rounded off to the nearest hundred is ___.

2. Round off each of the following numbers to the nearest 100:

   a) 679 = ___
   b) 1 202 = ___
   c) 1 681 = ___

3. Estimate the position of the arrow on the number line.

   a)

   

   b)

   

   c)

4. Circle the number which you look at when deciding whether to round up or down to the nearest 100. Underline the number which you look at to tell you what ten you will round up or down to.

   a) 599
   b) 2 743
   c) 8 982

More rounding off:

What does it mean to round off to the nearest:

• rand
• centimetre
More number sentences

**Quick recall.**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28 +</td>
<td></td>
<td>72 +</td>
<td></td>
<td>56 +</td>
</tr>
<tr>
<td>42 +</td>
<td></td>
<td>37 +</td>
<td></td>
<td>91 +</td>
</tr>
<tr>
<td>95 +</td>
<td></td>
<td>27 +</td>
<td></td>
<td>51 +</td>
</tr>
<tr>
<td>36 +</td>
<td></td>
<td>25 +</td>
<td></td>
<td>38 +</td>
</tr>
<tr>
<td>17 +</td>
<td></td>
<td>29 +</td>
<td></td>
<td>55 +</td>
</tr>
</tbody>
</table>

1. **Fill in the missing number.**
   - a. 46 + [ ] = 50
   - b. 15 + [ ] = 20
   - c. 23 + [ ] = 30
   - d. 29 + [ ] = 40
   - e. 55 + [ ] = 60
   - f. 74 + [ ] = 80
   - g. 86 + [ ] = 90
   - h. 45 + [ ] = 60
   - i. 91 + [ ] = 100
   - j. 75 + [ ] = 100

2. **Fill in the missing number.**
   - a. 45 + [ ] = 100
   - b. 32 + [ ] = 50
   - c. 51 + [ ] = 80
   - d. 56 + [ ] = 90
   - e. 15 + [ ] = 50
   - f. 95 + [ ] = 120
   - g. 69 + [ ] = 100
   - h. 44 + [ ] = 150
   - i. 75 + [ ] = 150
   - j. 31 + [ ] = 120

3. **Fill in the missing number.**
   - a. 122 + [ ] = 150
   - b. 102 + [ ] = 150
   - c. 135 + [ ] = 180
   - d. 141 + [ ] = 200
   - e. 156 + [ ] = 200
   - f. 115 + [ ] = 200
   - g. 120 + [ ] = 250
   - h. 200 + [ ] = 325
   - i. 215 + [ ] = 320
   - j. 250 + [ ] = 550

4. **Fill in the missing number.**
   - a. 540 + [ ] = 600
   - b. 230 + [ ] = 500
   - c. 630 + [ ] = 1000
   - d. 320 + [ ] = 1000
   - e. 880 + [ ] = 1000
   - f. 470 + [ ] = 800
   - g. 550 + [ ] = 1000
   - h. 600 + [ ] = 850
   - i. 490 + [ ] = 1000
   - j. 500 + [ ] = 890

5. **Fill in the missing number.**
   - a. 1 560 + [ ] = 1700
   - b. 1 250 + [ ] = 1500
   - c. 1 380 + [ ] = 1500
   - d. 1 820 + [ ] = 1900
   - e. 1 190 + [ ] = 1500
   - f. 1 080 + [ ] = 1500
   - g. 1 230 + [ ] = 1800
   - h. 1 500 + [ ] = 1980
   - i. 1 370 + [ ] = 1500
   - j. 1 400 + [ ] = 2000

6. **Fill in the missing number.**
   - a. 1 733 + [ ] = 1800
   - b. 1 256 + [ ] = 1500
   - c. 1 612 + [ ] = 1800
   - d. 1 347 + [ ] = 1400
   - e. 1 431 + [ ] = 1600
   - f. 1 677 + [ ] = 2000
   - g. 1 697 + [ ] = 2000
   - h. 1 244 + [ ] = 2000
   - i. 1 009 + [ ] = 1500
   - j. 1 314 + [ ] = 2000

**Number card fun.**

What to do:
- Play in pairs.
- The first player chooses a one thousand card and then one of each: hundreds, tens and units card, and displays them as a number.
- The first player that fills the number up to the nearest 2000, gets a point.
- Do the same, but player two chooses the cards. Repeat five times.
- The player with the highest score is the winner.

In this game we will only play with the 1000 card, not 2000 to 9000.
What is the difference between the numbers?

<table>
<thead>
<tr>
<th></th>
<th>850</th>
<th>900</th>
<th>950</th>
<th>1 000</th>
<th>1 050</th>
<th>1 100</th>
<th>1 150</th>
<th>1 200</th>
<th>1 250</th>
<th>1 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>003</td>
<td>203</td>
<td>303</td>
<td>403</td>
<td>503</td>
<td>603</td>
<td>703</td>
<td>803</td>
<td>903</td>
<td>1 003</td>
<td>1 103</td>
</tr>
<tr>
<td>505</td>
<td>1 050</td>
<td>1 080</td>
<td>1 110</td>
<td>1 140</td>
<td>1 170</td>
<td>1 200</td>
<td>1 230</td>
<td>1 260</td>
<td>1 290</td>
<td>1 320</td>
</tr>
<tr>
<td>004</td>
<td>40</td>
<td>160</td>
<td>280</td>
<td>400</td>
<td>520</td>
<td>640</td>
<td>760</td>
<td>880</td>
<td>1 000</td>
<td>1 120</td>
</tr>
<tr>
<td>550</td>
<td>700</td>
<td>850</td>
<td>1 000</td>
<td>1 150</td>
<td>1 300</td>
<td>1 450</td>
<td>1 600</td>
<td>1 750</td>
<td>1 900</td>
<td></td>
</tr>
</tbody>
</table>

1. What number comes next?
   a. 1 000, 1 120, 1 240, __________
   b. 900, 950, 1 000, __________
   c. 150, 180, 210, __________
   d. 207, 307, 407, __________

2. Complete the table:

<table>
<thead>
<tr>
<th>Number</th>
<th>Add 10</th>
<th>Add 100</th>
<th>Add 1 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>808</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>450</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>752</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>990</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Use both methods above to calculate the following. Write down the steps.

Example:

732 + 614

\[
\begin{array}{c}
700 & 30 & 2 & + & 600 & 10 & 4 \\
\hline
= 700 + 30 + 2 + 600 + 10 + 4 \\
= 1 000 + 40 + 6 \\
= 1 000 + 300 + 40 + 6 \\
= 1 346 \\
\end{array}
\]

a. 1 002 + 487 =

b. 295 + 1 703 =

c. 321 + 902 =

d. 800 + 706 =

e. 816 + 174 =

f. 110 + 836 =

Continue on an extra sheet of paper.
4. Solve the following word problems.

a. There were 1,450 spectators at the game. Another 325 arrived. What was the total number of spectators who saw the game?

b. Lindi walked 1,265 m on the first day. On the second day she was a bit tired and walked 650 m. How far did she walk in two days?

5. Write an appropriate and interesting word sum for: 1,500 and 300. Solve it.
### Adding by Filling the Tens

#### Which sum is easier to add? Why?

<table>
<thead>
<tr>
<th>Sum</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 + 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 + 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 + 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 + 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In one minute, how many combinations can you find that add up to 50?

1. Fill up the tens.

<table>
<thead>
<tr>
<th>Example</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 + 7</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2 + 8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5 + 5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>1 + 9</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>6 + 4</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

2. Fill up the ones.

<table>
<thead>
<tr>
<th>Example</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 + 2</td>
<td>10</td>
</tr>
<tr>
<td>9 + 1</td>
<td>10</td>
</tr>
<tr>
<td>4 + 6</td>
<td>10</td>
</tr>
<tr>
<td>7 + 3</td>
<td>10</td>
</tr>
<tr>
<td>0 + 10</td>
<td>10</td>
</tr>
</tbody>
</table>

Are there more combinations that will add up to ten?

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 +</td>
<td>7</td>
</tr>
<tr>
<td>5 +</td>
<td>5</td>
</tr>
<tr>
<td>2 +</td>
<td>8</td>
</tr>
<tr>
<td>7 +</td>
<td>3</td>
</tr>
<tr>
<td>0 +</td>
<td>10</td>
</tr>
</tbody>
</table>

3. Fill up the hundreds.

Example: 486

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>486 + 14</td>
<td>500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 368</td>
<td></td>
</tr>
<tr>
<td>b. 371</td>
<td></td>
</tr>
<tr>
<td>c. 684</td>
<td></td>
</tr>
<tr>
<td>d. 519</td>
<td></td>
</tr>
<tr>
<td>e. 225</td>
<td></td>
</tr>
<tr>
<td>f. 568</td>
<td></td>
</tr>
<tr>
<td>g. 274</td>
<td></td>
</tr>
<tr>
<td>h. 479</td>
<td></td>
</tr>
<tr>
<td>i. 383</td>
<td></td>
</tr>
</tbody>
</table>

4. Calculate the following:

Example: Calculate 2 486 + 48

\[
\begin{align*}
2486 + 48 &= (2486 + 14) - 14 + 48 \\
           &= 2500 + (48 - 14) \\
           &= 2500 + 34 \\
           &= 2534
\end{align*}
\]

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 3526</td>
<td>97</td>
</tr>
<tr>
<td>b. 6537</td>
<td>84</td>
</tr>
<tr>
<td>c. 4833</td>
<td>95</td>
</tr>
<tr>
<td>d. 1789</td>
<td>39</td>
</tr>
<tr>
<td>e. 2786</td>
<td>56</td>
</tr>
<tr>
<td>f. 8976</td>
<td>41</td>
</tr>
<tr>
<td>g. 4324</td>
<td>98</td>
</tr>
<tr>
<td>h. 8159</td>
<td>62</td>
</tr>
<tr>
<td>i. 6847</td>
<td>73</td>
</tr>
</tbody>
</table>

5. Find another five combinations that will add up to 100.

Example:

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>37 + 3</td>
<td>40</td>
</tr>
<tr>
<td>14 + 6</td>
<td>20</td>
</tr>
<tr>
<td>79 + 1</td>
<td>80</td>
</tr>
<tr>
<td>56 + 4</td>
<td>60</td>
</tr>
<tr>
<td>92 + 8</td>
<td>100</td>
</tr>
</tbody>
</table>

Find another five combinations that will add up to 100.

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 + 5</td>
<td>30</td>
</tr>
<tr>
<td>68 + 2</td>
<td>70</td>
</tr>
<tr>
<td>43 + 7</td>
<td>50</td>
</tr>
<tr>
<td>84 + 6</td>
<td>90</td>
</tr>
<tr>
<td>36 + 4</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 32</td>
<td></td>
</tr>
<tr>
<td>b. 46</td>
<td></td>
</tr>
<tr>
<td>c. 54</td>
<td></td>
</tr>
<tr>
<td>d. 72</td>
<td></td>
</tr>
<tr>
<td>e. 78</td>
<td></td>
</tr>
<tr>
<td>f. 68</td>
<td></td>
</tr>
<tr>
<td>g. 15</td>
<td></td>
</tr>
<tr>
<td>h. 94</td>
<td></td>
</tr>
<tr>
<td>i. 83</td>
<td></td>
</tr>
</tbody>
</table>

#### The Concert

7 894 people came to see a concert. There were 68 security guards. How many people were in the stadium?

<table>
<thead>
<tr>
<th>Sum</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>7894 + 68</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>7962</td>
</tr>
</tbody>
</table>
Subtraction up to 4-digit numbers

What is the difference between the numbers?

<table>
<thead>
<tr>
<th>100</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>208</td>
<td>308</td>
<td>408</td>
<td>508</td>
<td>608</td>
<td>708</td>
<td>808</td>
<td>908</td>
<td>1108</td>
<td></td>
</tr>
<tr>
<td>1050</td>
<td>1150</td>
<td>1250</td>
<td>1350</td>
<td>1450</td>
<td>1550</td>
<td>1650</td>
<td>1750</td>
<td>1850</td>
<td>1950</td>
</tr>
<tr>
<td>1350</td>
<td>1450</td>
<td>1550</td>
<td>1650</td>
<td>1750</td>
<td>1850</td>
<td>1950</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>1100</td>
<td>1200</td>
<td>1300</td>
<td>1400</td>
<td>1500</td>
<td>1600</td>
<td>1700</td>
<td>1800</td>
<td>1900</td>
</tr>
</tbody>
</table>

1. What number comes next?
   a. 1 350, 1 300, 1 250,      b. 1 800, 1 700, 1 600, 1 500, 1 400, 1 300, 1 200, 1 100, 1 000
   c. 1 350, 1 300, 1 250,      d. 1 900, 1 800, 1 700, 1 600, 1 500, 1 400, 1 300, 1 200, 1 100, 1 000

2. Complete the table:

<table>
<thead>
<tr>
<th>Number</th>
<th>Subtract 10</th>
<th>Subtract 100</th>
<th>Subtract 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 847</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 680</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 955</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples:
Example 1:
1 984 – 356
= (1 000) + (90 - 30) + (8 - 6) + (4 - 6)
= 1 000 + 60 + 2
= 1 062

Example 2:
1 580 – 356
= (1 000) + (500 - 300) + (80 - 50)
= 1 000 + 200 + 30
= 1 240

Example 2:
1 642 – 1 268
= (1 000) + (600 - 200) + (40 - 8)
= 1 000 + 400 + 30
= 1 430

3. Use both methods to solve the subtraction sums.
   a. 1 953 – 641
   b. 1 784 – 933
   c. 1 988 – 1 259
   d. 1 204 – 684

Continue on an extra sheet of paper.
4. Solve the following word problems.

a. There are 785 apples at the fruit shop. They sell 83 apples. How many apples are left?

b. Thabo had 2000 litres of milk. He sold 256 litres of milk in the first week and 193 litres in the second week. How many litres did he sell altogether?

e. 1743 – 1399

Continue on an extra sheet of paper.

What is the size of your number?

What to do:
- Individual game against a group or the class.
- Roll the 100s dice.
- Subtract the number the dice landed on, from the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.

What you need:
- Use the 100s dice made before.
- Piece of paper.
More subtraction up to 4-digit numbers

If you want to subtract the units from the units, the tens from the tens, the hundreds from the hundreds and the thousands from the thousands, what will you do?

<table>
<thead>
<tr>
<th>7000</th>
<th>8</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>30</td>
<td>2000</td>
</tr>
<tr>
<td>200</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

1. Subtract the following:
   a. 60 – 20 =  
   b. 5 – 2 =  
   c. 800 – 400 =  
   d. 600 – 400 =  
   e. 9000 – 3000 =  
   f. 700 – 100 =  
   g. 7 – 2 =  
   h. 70 – 30 =  
   i. 5000 – 1000 =  

2. Subtract the following:

   **Example 1**
   320 – 180
   = [300 + 20] – 100 – 80
   = 200 + 20 – 80
   = 100 + 120 – 80
   = 140

   a. 620 – 210 =  
   b. 640 – 330 =  
   c. 720 – 420 =  

3. Round off the numbers to 1 000 and subtract it. Subtract the given numbers and compare the rounded off numbers answer with the given numbers answer.

   **Example 1:**
   4687 – 2143
   Rounded off:
   5000 – 2000
   3000

   a. 3857 – 2436 =  
   b. 7576 – 5125 =  
   c. 5387 – 4263 =  

   **Example 2:**
   Calculate 4687 – 2143.

   Example: Breaking down all the numbers to be added using compensation (counterbalance).
   Calculate: 8743 – 5684
   = [8000 + 600 + 130 + 13] – 5000 – 600 – 80 – 4
   = [8000 – 5000] + [600 – 600] + [130 – 80] + [13 – 4]
   = 3000 + 0 + 50 + 9
   = 3059

   a. 3568 – 1689 =  
   b. 7485 – 3597 =  
   c. 5883 – 3995 =  

   **The cost of wheat**

   The price for a container of wheat is R8 231. Since some of the wheat is spoiled, the price is decreased by R3 789. What price does a shop owner pay for the container of wheat?
1. Complete the tables below.

<table>
<thead>
<tr>
<th>Fraction circle</th>
<th>What fraction is red?</th>
<th>What fraction is green?</th>
<th>Fraction circle</th>
<th>What fraction is red?</th>
<th>What fraction is green?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>1/2</td>
<td>1/2</td>
<td>e.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
<td>f.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
<td>g.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
<td>h.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Use the fraction circles to say if it is bigger than, smaller than or equal.

Fill in <, > or =

| a. 4/5 | 3/4 |
| b. 2/5 | 1/4 |
| c. 1/2 | 3/4 |
| d. 2/4 | 1/2 |
| e. 4/5 | 4/6 |
| f. 4/4 | 4/6 |

3. Use the fraction strips to answer the questions.

Fill in <, > or =

| a. 4/8 | 1/3 |
| b. 2/6 | 1/3 |
| c. 1/3 | 1/2 |
| d. 2/6 | 4/8 |
| e. 1/2 | 4/8 |
| f. 3/4 | 4/8 |

4. Which fraction comes next if I count forwards?

| a. 1/4 | 2/4 | 3/4 | 4/4 |
| b. 1/6 | 2/6 | 3/6 |
| c. 2/5 | 3/5 | 4/5 |
| d. 4/8 | 5/8 | 6/8 |

Fraction Dominoes

- Use Cut-out 6.
- After shuffling the dominoes, each player draws tiles to make up their hand. The number of tiles drawn depends on the number of players.
- The player with the largest fraction starts. Play proceeds to the left (clockwise). Each player adds a domino to an open end of the layout, if possible.
- A player who cannot make a move must pass. The game ends when one player uses the last domino in his or her hand, or when no more plays can be made. If all players still have tiles in their hand, but no more moves can be made, then the game is said to be “blocked.”
Look at the building and answer the questions.

1. What fraction of the red window is:
   a. Washed?
   b. Still dirty?

2. What fraction of the orange window is:
   a. Washed?
   b. Still dirty?

3. What fraction of the green window is:
   a. Washed?
   b. Still dirty?

4. What fraction of the purple window is:
   a. Washed?
   b. Still dirty?

5. What fraction of the blue window is:
   a. Washed?
   b. Still dirty?

6. What fraction of the door is:
   a. Washed?
   b. Still dirty?
1. Match the fraction strip with the fraction circle on the left.

2. Find the fraction and colour in the following.

3. Write the fractions on the fraction diagram. We have done two examples for you.

4. Fill in <, >, or =. Use the fraction strips above to help you.

Fractions dice
- Use Cut-out 4.
- Throw the fraction dice.
- Then take a fraction strip that matches the fraction on the face of the dice. If the face is \( \frac{1}{4} \), take a quarter strip.
- If you are correct keep the fraction strip.
- At the end count your fraction strips.
- The winner is the person with the most fraction strips.
Quick recall. How fast can you answer the following?

1. Complete the table.

<table>
<thead>
<tr>
<th>Fraction circle</th>
<th>Fraction</th>
<th>Division</th>
<th>Division sum in words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>halves</td>
<td>$\frac{1}{2}$</td>
<td>One circle divided by two equals two halves.</td>
</tr>
<tr>
<td>$\frac{1}{2}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{3}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{4}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{5}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{6}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{7}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\frac{1}{8}$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fraction strip Fraction pieces. Make your own drawing. Write a division sum.

1. $\frac{1}{2}$

2. $\frac{1}{3}$

3. $\frac{1}{4}$

4. $\frac{1}{5}$

5. $\frac{1}{6}$

6. $\frac{1}{7}$

7. $\frac{1}{8}$
1. Use the fraction strips. Answer the questions below.

- a. What fraction is smaller than \( \frac{1}{2} \)?
- b. What fraction is bigger than \( \frac{1}{2} \)?
- c. What fractions are smaller than \( \frac{2}{3} \)?
- d. What fraction is smaller than \( \frac{1}{2} \)?
- e. What fraction is bigger than \( \frac{1}{2} \)?
- f. What fraction is equal \( \frac{1}{2} \)?
- g. What fractions are smaller than \( \frac{2}{3} \)?
- h. What fractions are bigger than \( \frac{2}{3} \)?
- i. What fractions are smaller than \( \frac{2}{6} \)?
- j. What fraction is equal \( \frac{1}{3} \)?

2. Look at the pictures and answer the questions.

- a. Four cups = _____ ml.
- b. Four cups = _____ litre.
- c. One cup is _____ of a litre.
- d. Two cups are _____ of a litre.
- e. Three cups are _____ of a litre.
- f. Four cups are _____ of a litre.
- g. What fractions are smaller than ______? 
- h. What fractions are bigger than ______?
- i. What fractions are smaller than ______?
- j. What fraction is equal ______?

3. Fill in <, > or =

- a. 3 cups _____ \( \frac{1}{2} \) of a litre.
- b. \( \frac{1}{2} \) of a litre _____ 4 cups.
- c. 4 cups _____ 1 litre.
- d. 1 cup _____ \( \frac{1}{4} \) of a litre.
- e. 2 cups _____ 500 ml
- f. 2 cups _____ \( \frac{1}{4} \) of a litre.
Common fractions

Discuss the following:

\[ \frac{1}{4} \text{ is green} \]
\[ \frac{2}{4} \text{ is blue} \]
\[ \frac{3}{4} \text{ is red} \]
\[ \frac{1}{4} \text{ is blue and red. Why?} \]

1. Add the coloured parts on the fraction strips.

   a. \[ \frac{1}{3} + \frac{1}{3} = \frac{2}{3} \]
   b. \[ \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{3}{3} \]
   c. \[ \frac{1}{4} + \frac{1}{4} = \frac{2}{4} \]
   d. \[ \frac{1}{5} + \frac{1}{5} = \frac{2}{5} \]
   e. \[ \frac{1}{6} + \frac{1}{6} = \frac{2}{6} \]

2. Add the red and green parts of the diagram.

   a. \[ \frac{3}{4} + \frac{1}{2} = \frac{5}{4} \]
   b. \[ \frac{1}{4} \]
   c. \[ \frac{3}{5} + \frac{1}{5} = \frac{4}{5} \]
   d. \[ \frac{2}{4} + \frac{3}{4} = \frac{5}{4} \]
   e. \[ \frac{4}{8} + \frac{3}{8} = \frac{7}{8} \]
   f. \[ \frac{1}{12} + \frac{1}{12} = \frac{2}{12} \]

3. What fraction of the sweets are orange and blue?

4. Add the following:

   a. \[ \frac{1}{4} + \frac{1}{4} = \frac{2}{4} \]
   b. \[ \frac{3}{5} + \frac{1}{5} = \frac{4}{5} \]
   c. \[ \frac{2}{6} + \frac{4}{6} = \frac{6}{6} = 1 \]
   d. \[ \frac{2}{4} + \frac{3}{4} = \frac{5}{4} \]
   e. \[ \frac{4}{8} + \frac{3}{8} = \frac{7}{8} \]
   f. \[ \frac{1}{12} + \frac{1}{12} = \frac{2}{12} \]

Eating chocolate

Susan eats two eights of a chocolate bar. How much is left over? Show your answer with a drawing.
Length – using your ruler.
• The pencil starts at zero and measures 6 cm or 60 mm long.
• On the first ruler each cm is marked but there are unmarked divisions in between. What are they?
• On the second ruler each mm is marked.
• Each 10 mm makes 1 cm.

1. Label the first ruler in cm and the second one in mm.

2. Measure each object and give your answer in cm and mm. Order the objects from shortest to longest.
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 

3. Complete the numbers on the ruler, measure the lines and complete the table.

<table>
<thead>
<tr>
<th>Color</th>
<th>Answer in mm</th>
<th>Answer in cm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

4. Answer the following:
   Write your answers in mm and cm.
   a. Which line is the longest?
   b. Which line is the shortest?

One metre outing ...

Find 10 things that are 1 metre long.
1. Estimate, measure and compare in millimetres.

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Measure</th>
<th>Difference between estimation and measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Length of book</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Length of desk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Width of desk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Height of suitcase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Length of suitcase</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Estimate, measure and compare in metres.

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Measure</th>
<th>Difference between estimation and measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Length of class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Width of class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Length of teacher’s desk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Height of teacher’s desk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Length of any outside area</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. If the object is shorter than 20 cm but longer than 10 cm, what could the object be?

4. What are the abbreviations for:
   a. millimetre  b. centimetre  c. metre  d. kilometre

5. Give examples of objects that you would measure in:
   a. mm  b. cm  c. m  d. km

6. Compare the following: Remember to state the measurement unit.

   a. Two pencils of different lengths.
   b. Two books of different lengths.
   c. Two books of different widths.
   d. The length of a sheet of paper with the length of a sheet of paper that is folded once.
   e. The width of a sheet of paper with the width of a sheet of paper that is folded once.
   f. The height and width of the door.
   g. The length and width of your desk.
   h. The length and width of the classroom.
   i. The length and width of any outside area.
Read the statements. Say what you would measure with: centimetres, metres or kilometres.

- **Sign:**
- **Date:**

1. Convert the following to the other two measurement units.
   - a. 10 mm =
   - b. 100 cm =
   - c. 1 000 mm =
   - d. 1 000 m =

2. Write the following in cm and mm, and then as cm.
   - Example:
     - 35 mm = 3 cm and 5 mm or 3 1/2 cm
   - a. 75 mm =
   - b. 65 mm =
   - c. 35 mm =
   - d. 15 mm =
   - e. 5 m =
   - f. 85 mm =

3. Write the following in mm.
   - Example:
     - 3 1/2 cm = 35 mm
   - a. 4 cm and 3 mm
   - b. 6 1/4 cm
   - c. 7 cm and 8 mm
   - d. 9 1/2 cm
   - e. 5 cm and 9 mm
   - f. 18 1/2 cm

4. Write the following in m and cm.
   - Example:
     - 26 cm = 5 m and 26 cm
   - a. 197 cm
   - b. 521 cm
   - c. 362 cm
   - d. 418 cm
   - e. 235 cm
   - f. 756 cm

5. Write the following as cm.
   - a. 1 m 42 cm
   - b. 5 m 24 cm
   - c. 4 m 69 cm
   - d. 6 m 31 cm
   - e. 2 m 13 cm
   - f. 7 m 88 cm
   - g. 3 m 55 cm
   - h. 9 m 76 cm
   - i. 8 m 97 cm

6. Write the following as km.
   - a. 3 500 m
   - b. 7 500 m
   - c. 8 900 m
   - d. 3 200 m
   - e. 6 100 m
   - f. 6 500 m
   - g. 8 500 m
   - h. 4 200 m
   - i. 3 800 m

7. Write the following as m.
   - a. 4 1/2 km
   - b. 9 1/2 km
   - c. 2 km 400 m
   - d. 7 km 800 m
   - e. 5 1/2 km
   - f. 6 km 300 m
   - g. 7 1/2 km
   - h. 9 km 200 m
   - i. 1 1/2 km

**Distances**

- a. I travelled 4 1/2 km. My friend travelled 4 700 km. Who travelled the furthest?
- b. I bought 5 700 mm of string and then 3 100 mm more. How much string did I buy? Write down your answer in mm and cm and then in m.
- c. I bought 9 m of ribbon. I used 4 1/2 m. How much ribbon do I have left? Write your answer in mm and cm.
- d. My father's desk is 2 200 mm long and mine measures 1 900 mm. How much longer is my father's desk? Write down your answer in mm and cm.
- e. I bought 20 m of wool. I used 11 1/2 m. How much wool do I have left? Write your answer in mm and cm.
1. Show the multiples on the number lines.

2. Solve the following by showing it on a number line.

   a. How much will 600 g of cheese cost?
   
   Number sentence: \( R5 \times 6 = R30 \)

   b. How much will 900 g viennas cost?

   c. How much will 1 000 g chicken cost?

   d. How much will 12 apples cost?

Sugar

The mass of 10 bags of sugar is 300 kg. What is the mass of 1 bag of sugar?
Give the total of the numbers in each shape. Use multiplication.

1. Complete the table below.

<table>
<thead>
<tr>
<th>Number</th>
<th>x 10</th>
<th>x 20</th>
<th>x 30</th>
<th>x 40</th>
<th>x 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Are these multiples of (extend the pattern):

   a. 10? 50, 60, 70, 80, __________

   b. 20? 260, 280, 300, 320, __________

   c. 40? 160, 200, 240, 280, __________

   d. 100? 200, 300, 400, 500, __________

   e. 90? 180, 270, 360, 450, __________

3. Use the method below to solve the multiplication sums on this and the next page.

   Example:
   
   11 x 12
   = (10 + 1) x (10 + 2)
   = (10 x 10) + (1 x 10) + (10 x 2) + (1 x 2)
   = 100 + 10 + 20 + 2
   = 132

   a. 12 x 13 =

   b. 10 x 21 =

Continue on an extra sheet of paper.
4. Solve the problem.
Each box has 42 apples. How many apples are there altogether in 12 boxes? Show all calculations.

c. 22 x 14 =

d. 23 x 17 =
e. 19 x 22 =

How fast are you?

What to do:
- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each colour number on the circle by the same colour rectangle’s to get your answer.

<table>
<thead>
<tr>
<th>Circle</th>
<th>Rectangle 1</th>
<th>Rectangle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>10</td>
<td>90</td>
<td>20</td>
</tr>
</tbody>
</table>
Give the total of the numbers in each shape. Use multiplication.

1. Complete the table below.

<table>
<thead>
<tr>
<th>Number</th>
<th>x 10</th>
<th>x 20</th>
<th>x 30</th>
<th>x 40</th>
<th>x 50</th>
<th>x 60</th>
<th>x 70</th>
<th>x 80</th>
<th>x 90</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. These are multiples of (extend the pattern):

a. 20: 60, 80, 100, 120, ____, ____, ____, ____, ____

b. 50: 150, 200, 250, 300, ____, ____, ____, ____

c. 100: 500, 600, 700, 800, ____, ____, ____, ____

d. 200: 200, 400, 600, 800, ____, ____, ____, ____

e. 250: 0, 250, 500, 750, ____, ____, ____, ____

3. Use the method below to solve the sums.

Example:

48 x 36
= (40 + 8) x (30 + 6)
= [40 x 30] + [8 x 30] + [40 x 6] + [8 x 6]
= 1 200 + 240 + 240 + 48
= 1 000 + 200 + 200 + 40 + 40 + 8
= 1 000 + 200 + 200 + 40 + 40 + 8
= 1 000 + 200 + 200 + 40 + 40 + 8
= 1 728

a. 23 x 54 =

b. 28 x 62 =

Continue on an extra sheet of paper.
4. There are 38 children in our class. Each child needs to pay R45 for their stationery. How much money must your teacher collect?

- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each number on the circle by the same colour rectangles to get your answer.

- c. 35 x 54 =
- d. 33 x 39 =
- e. 28 x 71 =

Continue on an extra sheet of paper.
**Multiplication and approximation**

**Term 2**

Revise rounding off to the nearest 10. Look at the number lines and describe them.

Round 6 off to the nearest ten.

![Number line for 6]

What will 1, 2, 3 and 4 be when we round it off to the nearest 10?

It will be zero.

What will 5, 6, 7, 8 and 9 be when we round it off to the nearest 10?

It will be ten.

1. Round the following off to the nearest ten.
   - a. 13
   - b. 42
   - c. 35
   - d. 54
   - e. 21
   - f. 79
   - g. 68
   - h. 97
   - i. 86

2. Calculate these multiplication sums by approximating one or both of the numbers. Then multiply the numbers without approximation and compare the answers.

   **Example 1:**
   \[47 \times 45\]
   \[= 50 \times 45 \text{ (by approximating one number)}\]
   \[= 2000 \text{ (by approximating both numbers)}\]

   **Example 2:**
   \[47 \times 45\]
   \[= (40 + 7) \times (40 + 5)\]
   \[= 40 \times 40 + 40 \times 5 + 7 \times 40 + 7 \times 5\]
   \[= 1600 + 200 + 280 + 35\]
   \[= 2000 + 115\]
   \[= 2115\]

3. My answer is 1 440. What can the possible multiplicand and multiplier be?

   ![Continue on extra sheet of paper]

What is the approximate cost?

What is the approximate cost if my company wants to buy 52 pairs of shoes at R48 per pair?
Multiplication: 2-digit numbers by 2-digit numbers

Look at these examples. What do you notice?

Example 1:
- 6 = 2 \times 3
- 12 = 2 \times 2 \times 3
- 36 = 2 \times 2 \times 3 \times 3
- 18 = 2 \times 3 \times 3
- 72 = 2 \times 2 \times 2 \times 3 \times 3

Example 2:
- 45 = 3 \times 3 \times 5
- 30 = 2 \times 3 \times 5
- 10 = 2 \times 5
- 60 = 2 \times 2 \times 3 \times 5
- 50 = 2 \times 5 \times 5

1. Break down the number by multiplying 2s and 3s.
   a. 6
   b. 72
   c. 108

2. Break down the number by multiplying 2s or 3s or 5s or a combination.
   a. 30
   b. 60
   c. 20

3. Break down the multiplier (the second number) by multiplying 2s and 3s.
   Example:
   - 47 \times 12 = 47 \times 2 \times 6
     = 47 \times 2 \times 3
     = 94 \times 3
     = 188 \times 3
     = (100 + 80 + 8) \times 3
     = 300 + 240 + 24
     = 564
   
   I broke down the second number into 2 and 4
   I can break it down even further into 2, 2 and 3

4. Break down the multiplier by multiplying 2s, 3s and 5s.
   Example:
   - 53 \times 45 = 53 \times 9 \times 5
     = 53 \times 3 \times 3 \times 5
     = 159 \times 3 \times 5
     = 477 \times 5
     = (400 + 70 + 7) \times 5
     = 2000 + 350 + 35
     = 2385
   
   I broke down the second number into 9 and 5
   I can break it down even further into 3, 3 and 5

An apple a day!

A teacher paid R2 per apple. She bought 45 apples per class. She had to buy for all 3 classes in the grade. How much did she pay?
1. Write the number of objects you see in the picture next to the word.

<table>
<thead>
<tr>
<th>Prisms</th>
<th>Pyramids</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Triangular prism</td>
<td>e. Triangular pyramid</td>
</tr>
<tr>
<td>b. Rectangular prism</td>
<td>f. Square pyramid</td>
</tr>
<tr>
<td>c. Pentagonal prism</td>
<td>g. Pentagonal pyramid</td>
</tr>
<tr>
<td>d. Hexagonal prism</td>
<td>h. Hexagonal pyramid</td>
</tr>
</tbody>
</table>

2. Which of these are prisms? Write the names. Which of these are pyramids? Write the names. Which one is the cylinder and sphere?

   - Pentagonal pyramid
   - Cylinder
   - Sphere

Number madness

Shapes in a poster...

Three pictures of products which are packaged in rectangular prisms.

Which kind of prism is most appropriate for packaging books in? Why?

Three everyday objects which are spheres.

Three everyday objects which are cylinders.
1. Use Cut-out 7. Fold the nets (patterns) to make prisms and pyramids. Paste a different coloured head on each face (flat side) of the prism or pyramid.

2. Name the shapes of the faces (sides) in these objects.

<table>
<thead>
<tr>
<th>Prism</th>
<th>Shapes</th>
<th>Pyramids</th>
<th>Shapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Triangular prism</td>
<td>Triangle</td>
<td>e. Triangular pyramid</td>
<td></td>
</tr>
<tr>
<td>b. Cube</td>
<td></td>
<td>f. Square pyramid</td>
<td></td>
</tr>
<tr>
<td>c. Pentagonal prism</td>
<td></td>
<td>g. Pentagonal pyramid</td>
<td></td>
</tr>
<tr>
<td>d. Hexagonal prism</td>
<td></td>
<td>h. Hexagonal pyramid</td>
<td></td>
</tr>
</tbody>
</table>

3. Name the object. Name the shapes of the faces.

a. 

Name of object: [ ]
Shape of faces: [ ]

Do we see all the faces on the objects?

Everyday objects

Name the shapes of the faces of each object.
Describing and making models of 3-D objects

Look at these examples. What do you notice?

- Spheres: curved surfaces
- Cylinders: flat and curved surfaces
- Cones: flat and curved surfaces
- Rectangular prisms: flat surfaces
- Square-based pyramids: flat surfaces

1. Complete the table

<table>
<thead>
<tr>
<th>3-D object</th>
<th>Name the 3-D object</th>
<th>Number of faces</th>
<th>Shape of shaded face of the 3-D object</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Spheres" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image2" alt="Cylinders" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image3" alt="Cones" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image4" alt="Rectangular prisms" /></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="image5" alt="Square-based pyramids" /></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Name the object these shapes are forming.

a. Rectangular prism

b. Square-based pyramid

3. Trace the nets to make the 3-D objects. Describe each object.

a. Rectangular prism

Describe the object by using words such as:
- Surfaces (flat and curved)
- Shape of faces

b. Square-based pyramid

Describe the object by using words such as:
- Surfaces (flat and curved)
- Shape of faces

Box work

Redesign your favourite box. Choose a box that is a rectangular prism. Unfold it. Copy the pattern (net) and make a similar box.
Investigate geometric patterns

1. Extend the geometric pattern and write it as a number pattern.

   a.
   \[
   \begin{array}{cccc}
   & \text{(1)} & \text{(4)} & \text{(9)} & \text{(16)} \\
   \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \end{array}
   \]

   b.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

   c.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

   d.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

2. Extend the geometric pattern and complete the table. You may need extra paper for C and D.

   a.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

   b.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

   c.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

   d.
   \[
   \begin{array}{cccc}
   & \text{Pattern} & \text{1} & \text{2} & \text{3} & \text{4} & \text{5} & \text{6} & \text{10}
   \text{Number of blocks} & \text{1} & \text{4} & \text{9} & \text{16} & \text{25} & \text{36} & \text{49} & \text{64}
   \end{array}
   \]

Patterns in a sequence

What is the tenth pattern? Use a table to show your answer.
### Investigate and extend geometric patterns

Let us do some practical activities.

Build the following using cool drink cans. What is the difference between the patterns? What will the difference be between the fourth and the fifth pattern?

Build the following using bottle tops. What is the difference between the patterns? What will the difference be between the fourth and the fifth pattern?

1. Extend each pattern. Say what is the difference between the patterns. Say if the difference is the same or different between the patterns.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Extend the patterns.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Be creative

Extend this pattern. Make use of colour to make your pattern more interesting.
1. Are these the only lines of symmetry? How many more lines of symmetry can you identify? Draw them in a different colour.

2. Why do we have only one line of symmetry on this triangle?

3. Draw a line of symmetry on these real life objects.

4. Colour the butterflies to show that they are symmetrical.

5. Which of these pictures have lines of symmetry?

6. How many more lines of symmetry can you identify? What is the total number?

How many?

How many lines of symmetry will a regular octagon have?
3. Answer these questions.
   i. Does the shape have a line or lines of symmetry? Answer yes or no.
   ii. How many lines of symmetry will the following shapes have? Show the lines of symmetry on the shapes that are symmetrical.

![Images of shapes]

1. Show the lines of symmetry on the letters that are symmetrical.

   a. The letters that have lines of symmetry are
   b. The letters that do not have lines of symmetry are:

2. We will find numbers like these on, for example, a digital clock. Write in the block on the right-hand side the numbers that are symmetrical. Show the line of symmetry.

![Images of numbers]
What is the difference between the numbers? Count forwards.

<table>
<thead>
<tr>
<th>Number</th>
<th>Add 100</th>
<th>Subtract 100</th>
<th>Add 1 000</th>
<th>Subtract 1 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 212</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 910</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 106</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 069</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 989</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the difference between the numbers? Count backwards.

1. What number comes next?
   a. 1 000, 2 000, 3 000, 4 000
   b. 3 300, 3 400, 3 500,
   c. 689, 1 689, 2 689,
   d. 2 760, 3 760, 4 760.

2. Complete the table by adding or subtracting to or from the number in the first column.

3. Calculate these sums. Write the steps you use on a separate piece of paper.
   a. 2 481 + 1 318 =
   b. 1 516 + 3 243 =
   c. 3 265 + 1 329 =
   d. 2 548 + 1 264 =
   e. 1 458 + 1 258 =
   f. 1 786 + 2 547 =

4. Complete the word problems. Show your calculations.
   a. There were 75 children in the music lesson, 15 went home early and 3 went to soccer lessons. How many children were left in the music lesson?
   b. Andile collects 2 283 cans for recycling in the first month. He collects 3 325 cans in the second month. How many cans did he collect altogether?

I dropped my number puzzle.

Help me to fill the spaces so that each row and column adds up to 15. You can only use each number once.
Addition and subtraction up to 4-digit numbers

What is the difference between the numbers? Count forwards and backwards.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 000</td>
<td>7 000</td>
<td>8 000</td>
<td>9 000</td>
<td>10 000</td>
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<tr>
<td>3 070</td>
<td>4 070</td>
<td>5 070</td>
<td>6 070</td>
<td>7 070</td>
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<td>3 600</td>
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<td>5 900</td>
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<td>7 900</td>
<td>8 900</td>
<td>9 900</td>
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<tr>
<td>5 998</td>
<td>6 098</td>
<td>6 198</td>
<td>6 298</td>
<td>6 398</td>
</tr>
</tbody>
</table>

1. What number comes next?
   a. 7 000, 8 000, 9 000,
   b. 6 647, 6 747, 6 847,
   c. 6 989, 7 989, 8 989,
   d. 8 406, 8 906, 9 406,

2. Complete the table.

<table>
<thead>
<tr>
<th>Number</th>
<th>Add 100</th>
<th>Subtract 100</th>
<th>Add 1 000</th>
<th>Subtract 1 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 416</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 896</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>4 560</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 209</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Calculate the following:
   a. 7 568 + 64 =  
   b. 8 721 + 657 =  

4. Subtract the following:
   a. 9 471 – 49 =  
   b. 7 958 – 394 =  
   c. 9 864 – 1 459 =  
   d. 8 210 – 5 784 =  

5. 3 500 people attended the first show of a concert. Another 2 425 booked tickets for the second show but 518 of them did not arrive. How many people attended the second show?
### Explain the following:

<table>
<thead>
<tr>
<th>Number</th>
<th>Expanded Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 934</td>
<td>$8 000 + 900 + 30 + 4$</td>
</tr>
<tr>
<td>6 892</td>
<td>$6 000 + 800 + 90 + 2$</td>
</tr>
<tr>
<td>5 035</td>
<td>$5 000 + 30 + 5$</td>
</tr>
<tr>
<td>7 002</td>
<td>$7 000 + 2$</td>
</tr>
</tbody>
</table>

### 1. Complete the following, using the example provided.

**Example**

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8 + 7 =$</td>
<td>$8$</td>
<td>$10 + 5$</td>
</tr>
<tr>
<td>$80 + 70 =$</td>
<td>$150$</td>
<td>$100 + 50$</td>
</tr>
<tr>
<td>$800 + 700 =$</td>
<td>$1 500$</td>
<td>$1 000 + 500$</td>
</tr>
</tbody>
</table>

**a.** $9 + 6 =$

**b.** $5 + 6 =$

**c.** $90 + 60 =$

**d.** $50 + 60 =$

**e.** $900 + 400 =$

**f.** $500 + 400 =$

### 2. Calculate the following:

**Example:**

Calculate $5 362 + 2 486$

$5 362 + 2 486$

$= 5 000 + 300 + 60 + 2 + 2 000 + 400 + 80 + 6$

$= 7 000 + 700 + 140 + 8$

$= 7 848$

**OR**

$2 + 6 = 8$

And $60 + 80 = 140$

And $300 + 400 = 700$

And $5 000 + 2 000 = 7 000$

And $5 362 + 2 486 = 7 848$

#### a. $8 743 + 1 246 =$

#### b. $1 726 + 6 484 =$

#### c. $1 234 + 7 689 =$

### 3. Calculate the following:

**Example:**

Calculate $5 362 + 2 486$

$5 362 + 2 000 \rightarrow 7 362 + 400 \rightarrow 7 762 + 80 \rightarrow 7 842 + 6 \rightarrow 7 848$

#### a. $8 657 + 1 132 =$

#### b. $5 189 + 4 810 =$

#### c. $4 610 + 5 379 =$

#### d. $7 944 + 2 476 =$

#### e. $7 562 + 2 548 =$

#### f. $4 618 + 3 795 =$

### At the zoo

There were 3 562 people at the zoo during the first week of February. During the second week there were 3 649. How many people visited the zoo during the first two weeks of February?
### Problem solving: addition and subtraction

Look at the pictures. How do you feel when you get a problem to solve? How should you feel if you want to do well in mathematics?

#### 1. Solve the following problems:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Anandi bought an oven for R3 780 and a dinner set for R6 560. How much did she pay altogether?</td>
<td>b. Susan earns R3 460 each month cooking. How much does she earn in two months?</td>
</tr>
<tr>
<td>c. I have R6 834 in my bank account. I save R2 573. How much money do I have now?</td>
<td>d. Mark bought a computer and a computer program. He paid R9 470. The computer cost R7 435. How much did he pay for the computer program?</td>
</tr>
</tbody>
</table>

#### e. Mandla and Thandi bought plane tickets to visit their older brother in England. They paid R7 678 for one ticket. How much did the two tickets cost together?

#### f. Shakira has to send out books to schools in each province. She still needs to send 2 895 copies to North-West and 4 678 copies to the Northern Cape. How many copies have not been delivered yet?

#### g. Lerato is getting married. She paid R2 578 for the flowers and R4 243 for the food. How much did she have to pay for the flowers and the food together?

#### h. Wendy went to Durban. She paid R3 584 to stay at a hotel for a week. How much would she pay if she wanted to stay for two weeks?

### Four-digit problems

Create your own interesting maths problem using two 4-digit numbers.
Sharing and Grouping problems

Look at the two pictures below. Use the words 'group' and 'share' to describe it.

1. Complete the table using the example in the first row to guide you:

<table>
<thead>
<tr>
<th>Share between</th>
<th>Division sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>80 ÷ 8 = 10</td>
</tr>
<tr>
<td>5</td>
<td>36 ÷ 4 = 9</td>
</tr>
<tr>
<td>3</td>
<td>28 ÷ 4 = 7</td>
</tr>
<tr>
<td>4</td>
<td>40 ÷ 4 = 10</td>
</tr>
<tr>
<td>2</td>
<td>20 ÷ 4 = 5</td>
</tr>
</tbody>
</table>

2. Complete the following:

| 20 + 2 = | 200 + 2 = |
| 18 + 2 = | 180 + 2 = |
| 16 + 2 = | 160 + 2 = |
| 14 + 2 = | 140 + 2 = |
| 12 + 2 = | 120 + 2 = |
| 10 + 2 = | 100 + 2 = |
| 8 + 2 =  | 80 + 2 =  |
| 6 + 2 =  | 60 + 2 =  |
| 4 + 2 =  | 40 + 2 =  |
| 30 + 3 = | 300 + 3 = |
| 27 + 3 = | 270 + 3 = |
| 24 + 3 = | 240 + 3 = |
| 21 + 3 = | 210 + 3 = |
| 18 + 3 = | 180 + 3 = |
| 15 + 3 = | 150 + 3 = |
| 12 + 3 = | 120 + 3 = |
| 9 + 3 =  | 90 + 3 =  |
| 6 + 3 =  | 60 + 3 =  |
| 40 + 4 = | 400 + 4 = |
| 36 + 4 = | 360 + 4 = |
| 32 + 4 = | 320 + 4 = |
| 28 + 4 = | 280 + 4 = |
| 24 + 4 = | 240 + 4 = |
| 20 + 4 = | 200 + 4 = |
| 16 + 4 = | 160 + 4 = |
| 12 + 4 = | 120 + 4 = |
| 8 + 4 =  | 80 + 4 =  |
| 50 + 5 = | 500 + 5 = |
| 45 + 5 = | 450 + 5 = |
| 40 + 5 = | 400 + 5 = |
| 35 + 5 = | 350 + 5 = |
| 30 + 5 = | 300 + 5 = |
| 25 + 5 = | 250 + 5 = |
| 20 + 5 = | 200 + 5 = |
| 15 + 5 = | 150 + 5 = |
| 10 + 5 = | 100 + 5 = |

3. Describe the picture you see when you do these division sums.

How fast are you?

Colour any two numbers that will give you an answer of 2.

Colour any two numbers that will give you an answer of 3.
1. Complete the following:
   a. R 6
   b. R 10
   c. R 5
   d. R 10
   e. R 2

2. Write questions 1 a, b, c, d and e, above, with the “/” symbol
   a. R
   b. R
   c. R
   d. R
   e. R

3. Complete the following:

   How much do these apples cost if one apple costs R2?
   How much do these bananas cost if each banana costs R1.50?

   The milk costs R10/litre. How much does this milk cost?
   The chicken is on special for R25/kg. How much will 2 kg cost?

Quick counting ...

Quickly count the oranges in the bag. All of them cost R15. How much does one orange cost?

Remember: always do this activity when you go to a shop. This will sharpen your mental maths skills.
1. Complete the following:

<table>
<thead>
<tr>
<th>Class</th>
<th>Girls</th>
<th>Boys</th>
<th>We can write it as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>6</td>
<td>4</td>
<td>6:4</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Write a ratio for:

- a. Blue and red shirts.
- b. Blue and yellow shirts.
- c. Red and yellow shirts.

3. Draw the following:

- Red and yellow flowers: 4:5
- Dogs and cats: 8:6
- Boys and girls: 8:10
- Apples and bananas: 7:8

I love my teacher...

You have written this message for your teacher. What will the ratios be between:

- Red and blue jelly tots?
- Green and black jelly tots?
- Oranges and blue jelly tots?
Division of 2-digit numbers by 1-digit numbers

Reverse these division sums by giving a multiplication sum for each. We call this an inverse operation.

| 14 ÷ 2 = 7 | 50 ÷ 5 = 10 | 9 ÷ 3 = 3 | 36 ÷ 9 = 4 |
| 48 ÷ 6 = 8 | 15 ÷ 3 = 5 | 12 ÷ 2 = 6 | 24 ÷ 8 = 3 |
| 49 ÷ 7 = 7 | 64 ÷ 8 = 8 | 21 ÷ 3 = 7 | 35 ÷ 7 = 5 |
| 6 ÷ 3 = 2 | 25 ÷ 5 = 5 | 60 ÷ 6 = 10 | 40 ÷ 5 = 8 |
| 12 ÷ 6 = 2 | 18 ÷ 2 = 9 | 14 ÷ 7 = 2 | 40 ÷ 8 = 5 |

1. Give the inverse operation for the following.
   a. 57 ÷ 3 =
   b. 56 ÷ 8 =
   c. 60 ÷ 5 =
   d. 63 ÷ 9 =
   e. 68 ÷ 4 =
   f. 48 ÷ 2 =
   g. 54 ÷ 6 =
   h. 45 ÷ 9 =
   i. 42 ÷ 7 =

2. Use the two examples to guide you to solve the division sums.
   **Example 1:**
   50 ÷ 8 =
   We can ask ourselves how many groups of 8 will give us 50?
   
   Let us count
   8 16 24 32 40 48
   You can also use the table to help you.
   
   
   1 × 8 = 8
   2 × 8 = 16
   3 × 8 = 24
   4 × 8 = 32
   5 × 8 = 40
   6 × 8 = 48
   7 × 8 = 56
   8 × 8 = 64
   9 × 8 = 72
   
   **Example 2:**
   50 ÷ 8 =
   We can ask ourselves, if I share 50 between 8, how much will each get?
   
   Let us share
   8 10 12 14 16 18
   If we share 8 between 50 we will get 6 and two remainders.
   
   a. 60 ÷ 8 =
   b. 40 ÷ 9 =
   c. 31 ÷ 5 =
   d. 43 ÷ 2 =
   e. 66 ÷ 7 =
   f. 49 ÷ 4 =

3. Use the two examples to guide you to solve the division sums.
   **Example 1:**
   500 ÷ 8
   We can ask ourselves how many groups of 8 will give us 500.
   
   We say:
   60 groups of 8 will give us 480
   70 groups of 8 will give us 560
   560 is too big, so we will choose 60 groups
   
   We write:
   10 × 8 = 80
   20 × 8 = 160
   30 × 8 = 240
   40 × 8 = 320
   50 × 8 = 400
   60 × 8 = 480
   70 × 8 = 560
   
   **Example 2:**
   500 ÷ 8 =
   We can ask ourselves how many groups of 8 will give us 20.
   
   We say:
   2 groups of 8 will give us 16
   3 groups of 8 will give us 24
   24 is too big, so we will choose 2 groups
   
   We write:
   1 × 8 = 8
   2 × 8 = 16
   3 × 8 = 24

   Two groups of 8 will give me 16 with 4 left.
   
   60 groups + 2 groups = 62 groups
   500 ÷ 8 = 62 rem 4

   a. 650 ÷ 9 =
   b. 400 ÷ 9 =
   c. 301 ÷ 5 =

Sharing equally problems
   a. How many groups of 4 can you make with 36 marbles?
   b. How many groups of 8 can you make with 56 counters?
   c. How many groups of 6 can you make with 42 cards?
   d. Share 54 counters amongst 8 children.
   e. Share 47 marbles amongst 4 children.
   f. Share 43 sweets amongst 6 children.
Division of 3-digit numbers by 1-digit numbers

Share the blocks between 2 children. Do you have any blocks left?

1. Calculate the following:

Example 1:
375 ÷ 8 =
Let us break down the number 375 into (370 + 5).

Let us ask ourselves how many groups of 8 will give us 37?

Let us count

<table>
<thead>
<tr>
<th>Units × 8</th>
<th>8</th>
<th>16</th>
<th>24</th>
<th>32</th>
<th>40</th>
<th>48</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 × 8</td>
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</table>

4 groups will give us 32 but 5 groups are too big. How many groups of 8 will give us 370?
40 groups will give us 320 but 50 groups will give us 400. We have 50 left plus 5.

How many groups of 8 will give us 55.

Let us count

<table>
<thead>
<tr>
<th>Tens × 8</th>
<th>8</th>
<th>16</th>
<th>24</th>
<th>32</th>
<th>40</th>
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</table>

6 groups will give us 48 but 7 groups is too big.
So we have 48 and 7 left over.

The answer to 375 ÷ 8 is 46 remainder 7.

---

We are four children in our family. My father gave us R350 to share. We each received the same amount in full rands. How many rands remained?

We share the money:

Let us break down the number 350 into (300 + 50 + 40 + 10 + 5).

Let us ask ourselves how many groups of 8 will give us 35?

Let us count

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4 groups will give us 32 but 5 groups are too big. How many groups of 8 will give us 320?
40 groups will give us 320 but 50 groups will give us 400. We have 50 left plus 5.

How many groups of 8 will give us 55.

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</table>

6 groups will give us 48 but 7 groups is too big.
So we have 48 and 7 left over.

The answer to 350 ÷ 8 is 44 remainder 6.

---

We are four children in our family. My father gave us R350 to share. We each received the same amount in full rands. How many rands remained?

We share the money:

Let us break down the number 350 into (300 + 50 + 40 + 10 + 5).

Let us ask ourselves how many groups of 8 will give us 35?

Let us count

<table>
<thead>
<tr>
<th>Units × 8</th>
<th>8</th>
<th>16</th>
<th>24</th>
<th>32</th>
<th>40</th>
<th>48</th>
</tr>
</thead>
<tbody>
<tr>
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4 groups will give us 32 but 5 groups are too big. How many groups of 8 will give us 320?
40 groups will give us 320 but 50 groups will give us 400. We have 50 left plus 5.

How many groups of 8 will give us 55.

Let us count

<table>
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<tr>
<th>Tens × 8</th>
<th>8</th>
<th>16</th>
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<th>32</th>
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6 groups will give us 48 but 7 groups is too big.
So we have 48 and 7 left over.

The answer to 350 ÷ 8 is 44 remainder 6.

---

We are four children in our family. My father gave us R350 to share. We each received the same amount in full rands. How many rands remained?

We share the money:

Let us break down the number 350 into (300 + 50 + 40 + 10 + 5).

Let us ask ourselves how many groups of 8 will give us 35?

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6 groups will give us 48 but 7 groups is too big.
So we have 48 and 7 left over.

The answer to 350 ÷ 8 is 44 remainder 6.
Here are some key words for division and multiplication. Can you add any other words to the list?

Multiply by, multiply, groups of, product, lots of, times table, times, of
Divide by, share, share equally, divisible by, divide, divide into, group

Division problems

1. Solve the following problems:
   a. I bought 5 sport t-shirts for R265. How much did I pay per t-shirt?
      i. What is the question? How much did I pay per t-shirt?
      ii. What are the numbers? R265 and 5
      iii. What is the key word? Per (per tells me to divide)
      iv. What is the number sentence? R265 ÷ 5 =
      v. Solve it: R265 ÷ 5 = R53
      vi. Write a sentence: I paid R53 for each t-shirt.
   b. A shoe shop sells all pairs of shoes for R82. My mother and sister bought 9 pairs altogether. How much did they pay?
      i. ________________________________________
      ii. ________________________________________
      iii. ________________________________________
      iv. ________________________________________
      v. ________________________________________
      vi. ________________________________________
   c. The bookshop sold 8 books for R500. How much did each book cost?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________
   d. My teacher bought 7 story books for R69 each. How much did she pay for all the story books?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________
   e. My mother bought computer gadgets for R78 each. She bought 9 gadgets. How much did she pay altogether?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________
   f. I spent R600 on 6 computer games. How much did I pay for each game?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________
   g. My mother went on a training course for 7 days. The lunch cost R75 per day. How much did she pay for her lunches?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________
   h. I have R400. Computer games cost R75 each. How many games could I buy?
      i. ________________________________________
      ii. ________________________________________
      ...  ________________________________________
      vi. ________________________________________

Seating the guests

You need seats for 58 people at your party. You make one long table by joining a number of small tables. Each small table can seat two persons, plus one at each end of the long table, e.g. the 4 small tables below can seat 10 people. How many small tables do you need?

a. 28  b. 29  c. 30  d. 32  e. 34
<table>
<thead>
<tr>
<th>Mathematics Grade 4</th>
<th>Cut-out 1</th>
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<tbody>
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# Mathematics Grade 4

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Note: Make dice from these Cut-outs. After assembling the dice, keep them in a safe place because you will use them throughout the year.
Fraction strips

Fraction dice
### Mathematics Grade 4

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