<table>
<thead>
<tr>
<th>Task done</th>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td><strong>Revising place value</strong></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Working with 1000s</strong></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Numbers and place value</strong></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Comparing and ordering numbers</strong></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>&lt; and &gt;</strong></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td><strong>Rounding to the nearest 10</strong></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td><strong>Rounding to the nearest 100</strong></td>
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</tr>
<tr>
<td></td>
<td><strong>Sorting 2D shapes</strong></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>Polygons</strong></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Properties of polygons</strong></td>
<td>13</td>
</tr>
<tr>
<td></td>
<td><strong>Investigating quadrilaterals</strong></td>
<td>14</td>
</tr>
<tr>
<td></td>
<td><strong>More shapes</strong></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Complete the times</strong></td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>Using a calendar</strong></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td><strong>Your timetable</strong></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td><strong>Tenths</strong></td>
<td>19</td>
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<tr>
<td></td>
<td><strong>Decimals on a number line</strong></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Put them in order</strong></td>
<td>21</td>
</tr>
<tr>
<td></td>
<td><strong>Comparing decimal amounts</strong></td>
<td>22</td>
</tr>
<tr>
<td></td>
<td><strong>What should I use?</strong></td>
<td>23</td>
</tr>
<tr>
<td>✔</td>
<td><strong>Measuring with centimetres and millimetres</strong></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td><strong>Weighing in</strong></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td><strong>Reading scales</strong></td>
<td>26</td>
</tr>
<tr>
<td></td>
<td><strong>How much does it weigh?</strong></td>
<td>27</td>
</tr>
<tr>
<td></td>
<td><strong>Counting on and back</strong></td>
<td>28</td>
</tr>
<tr>
<td></td>
<td><strong>Making 100</strong></td>
<td>29</td>
</tr>
<tr>
<td></td>
<td><strong>Number chain investigations</strong></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td><strong>Symmetrical designs</strong></td>
<td>31</td>
</tr>
<tr>
<td></td>
<td><strong>Tables and graphs</strong></td>
<td>32</td>
</tr>
<tr>
<td></td>
<td><strong>More pictograms</strong></td>
<td>33</td>
</tr>
<tr>
<td></td>
<td><strong>Exploring the 4× table</strong></td>
<td>34</td>
</tr>
<tr>
<td></td>
<td><strong>Table strips</strong></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td><strong>What can you remember?</strong></td>
<td>36</td>
</tr>
<tr>
<td></td>
<td><strong>Multiplication and division</strong></td>
<td>37</td>
</tr>
<tr>
<td></td>
<td><strong>Build a tetrahedron</strong></td>
<td>38</td>
</tr>
<tr>
<td></td>
<td><strong>Negative numbers</strong></td>
<td>39</td>
</tr>
<tr>
<td></td>
<td><strong>More fractions of shapes</strong></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td><strong>Fractions of a set</strong></td>
<td>41</td>
</tr>
<tr>
<td></td>
<td><strong>Find the equivalent fractions</strong></td>
<td>42</td>
</tr>
<tr>
<td>Task done</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>More equivalent fractions</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Fraction medley</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Fractions and decimals</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Mixed numbers</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Position on a map</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>More map questions</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Compass directions</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Finding your way</td>
<td>50</td>
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<tr>
<td>More mazes</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Hitting the target</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Number machines</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Number wheels</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Pyramid numbers</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Perimeter of rectangles</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Drawing rectangles</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Investigating area</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Find the area</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Odd and even jumps</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Number patterns</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Sorting multiples</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Comparing angles</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>Comparing angles continued</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Revise multiplication facts</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Jumping in tens</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>From metres to centimetres</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Doubling</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Halving</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Multiplication</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Multiplication patterns</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Venn diagrams</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Carroll diagrams</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Division</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Division facts</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Number machines</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Divide or multiply?</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Enlarging and reducing shapes</td>
<td>78</td>
<td></td>
</tr>
</tbody>
</table>
Revising place value

1 Use three cards from the set to make:
   the smallest possible three-digit number 126
   the largest possible three-digit number 762
   a number in between the two numbers you made own answers

2 Use three cards from the set to make:
   the smallest possible three-digit number 368
   the largest possible three-digit number 986
   a number in between those numbers own answers

3 Solve each riddle. Write the number.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>I have 24 tens. I am 11 away from 254.</td>
<td>243</td>
</tr>
<tr>
<td>b</td>
<td>I am nearly 60 tens, but I am 9 too few.</td>
<td>591</td>
</tr>
<tr>
<td>c</td>
<td>If 7 tens were added to me, I would be 400.</td>
<td>330</td>
</tr>
<tr>
<td>d</td>
<td>I need 10 tens to make me 999.</td>
<td>899</td>
</tr>
<tr>
<td>e</td>
<td>I am 1 ten more than 510.</td>
<td>520</td>
</tr>
</tbody>
</table>
Working with 1000s

We can also write the number 4765 using expanded form:

\[ 4000 + 700 + 60 + 5 = 4765 \]

1. Write the value of the underlined digit in each number.
   
<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>
</tr>
</thead>
<tbody>
<tr>
<td>5240</td>
<td>1098</td>
<td>1609</td>
<td>3182</td>
<td>8056</td>
<td>7484</td>
<td>6179</td>
<td>2147</td>
<td>9762</td>
</tr>
<tr>
<td>200</td>
<td>0</td>
<td>1000</td>
<td>3000</td>
<td>50</td>
<td>7000</td>
<td>6000</td>
<td>100</td>
<td>60</td>
</tr>
</tbody>
</table>

2. Write each of these numbers using numerals.
   
<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>two thousand, eight hundred and forty-three</td>
<td>six thousand and sixty-five</td>
<td>eight thousand and fifteen</td>
<td>seven thousand, two hundred and twenty</td>
<td>four thousand and four</td>
</tr>
<tr>
<td>2843</td>
<td>6065</td>
<td>8015</td>
<td>7220</td>
<td>4004</td>
</tr>
</tbody>
</table>

3. Cut out five different four-digit numbers from a newspaper or magazine. Stick them in the table and write them in words.
   
<table>
<thead>
<tr>
<th>My numbers</th>
<th>In words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

you can use Student Book page 6
1 Write each of these numbers in expanded form:

a 5792 \(5000 + 700 + 90 + 2\)

b 3650 \(3000 + 600 + 50\)

c 8275 \(8000 + 200 + 70 + 5\)

d 1960 \(1000 + 900 + 60\)

e 2009 \(2000 + 9\)

f 6090 \(6000 + 90\)

2 Fill in the missing digits and numbers in each number sentence.

a \(1__543 = \underline{1000} + 500 + 40 + 3\)

b \(3__412 = 3000 + 400 + \underline{10} + 2\)

c \(4__88 = 4000 + \underline{80} + 8\)

d \(87__q = \underline{8000} + 700 + 90 + 9\)

e \(q__200 = 9000 + 200\)

f \(79__q = \underline{7000} + 900 + 90 + 9\)

3 Write the number that is equivalent to:

a four thousands, three hundreds and eight units \(4308\)

b two thousands, five tens and four ones \(2054\)

c eight thousands and four hundreds \(8400\)

d three thousands and twelve hundreds \(3200\)

e five thousands, four hundreds, fourteen tens and five units \(5545\)

see Student Book page 7
Comparing and ordering numbers

1. Write the numbers shown by each letter on the first number line.

   a 1000
   b 3000
   c 5000
   d 5500
   e 8000
   f 9500

2. Draw arrows to show approximately where each of these numbers will lie on the second 0–10 000 number line.

   3000
   8000
   6500
   2150
   7800
   9000
   9999

see Student Book page 8
1a. Fill in <, > or = between each pair of numbers.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>55</td>
<td></td>
<td>&lt; 129</td>
</tr>
<tr>
<td>b</td>
<td>212</td>
<td>&gt;</td>
<td>110</td>
</tr>
<tr>
<td>c</td>
<td>10</td>
<td>&gt;</td>
<td>0</td>
</tr>
<tr>
<td>d</td>
<td>20</td>
<td>&lt;</td>
<td>200</td>
</tr>
<tr>
<td>e</td>
<td>200</td>
<td>&gt;</td>
<td>30</td>
</tr>
<tr>
<td>f</td>
<td>195</td>
<td>&gt;</td>
<td>98</td>
</tr>
<tr>
<td>g</td>
<td>957</td>
<td>&gt;</td>
<td>599</td>
</tr>
<tr>
<td>h</td>
<td>199</td>
<td>&lt;</td>
<td>240</td>
</tr>
</tbody>
</table>

2a. Fill in <, > or = between each pair of quantities.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>double 10</td>
<td>&gt;</td>
<td>half of 20</td>
</tr>
<tr>
<td>b</td>
<td>100 hours</td>
<td>&gt;</td>
<td>2 days</td>
</tr>
<tr>
<td>c</td>
<td>600 m</td>
<td>&lt;</td>
<td>1 km</td>
</tr>
<tr>
<td>d</td>
<td>400 cm</td>
<td>&gt;</td>
<td>2 m</td>
</tr>
<tr>
<td>e</td>
<td>90 seconds</td>
<td>=</td>
<td>1 1/2 minutes</td>
</tr>
<tr>
<td>f</td>
<td>500 g</td>
<td>=</td>
<td>1/2 kg</td>
</tr>
<tr>
<td>g</td>
<td>7 cups</td>
<td>&lt;</td>
<td>2 litres</td>
</tr>
<tr>
<td>h</td>
<td>2500 ml</td>
<td>=</td>
<td>2.5 l</td>
</tr>
</tbody>
</table>

3. Do the calculations in each number sentence and write down the answers. Compare the answers to decide which sign you need for each pair of number sentences. Fill in <, > or = between each pair of number sentences.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>100 – 50</td>
<td>&gt;</td>
<td>200 – 180</td>
</tr>
<tr>
<td>b</td>
<td>40 × 2</td>
<td>&gt;</td>
<td>100 ÷ 2</td>
</tr>
<tr>
<td>c</td>
<td>25 + 10</td>
<td>&gt;</td>
<td>35 – 5</td>
</tr>
<tr>
<td>d</td>
<td>4 × 4</td>
<td>&gt;</td>
<td>3 × 2</td>
</tr>
<tr>
<td>e</td>
<td>9 × 3</td>
<td>&gt;</td>
<td>6 × 4</td>
</tr>
<tr>
<td>f</td>
<td>28 ÷ 4</td>
<td>&gt;</td>
<td>30 ÷ 5</td>
</tr>
<tr>
<td>g</td>
<td>10 + 10 + 5 + 8</td>
<td>&gt;</td>
<td>25 – 4</td>
</tr>
<tr>
<td>h</td>
<td>6 tens</td>
<td>&lt;</td>
<td>1 hundred</td>
</tr>
<tr>
<td>i</td>
<td>half of 18</td>
<td>&gt;</td>
<td>10 – 2</td>
</tr>
<tr>
<td>j</td>
<td>1/4 of 20</td>
<td>=</td>
<td>1/2 of 10</td>
</tr>
</tbody>
</table>

see Student Book pages 9–10
1. Round each number to the nearest ten.
   
   a. 317 \(\underline{320}\)  
   b. 233 \(\underline{230}\)  
   c. 671 \(\underline{670}\)  
   d. 994 \(\underline{990}\)  
   e. 2185 \(\underline{2190}\)  
   f. 3347 \(\underline{3350}\)  

2. For each calculation, round the number that is nearer to a ten.
   Then calculate the approximate answer.
   Work out the accurate answer.
   Complete some of your own calculations with approximations and calculations to finish the table.

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Rounded</th>
<th>Approximate answer</th>
<th>Accurate answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>42 + 34</td>
<td>40 + 34</td>
<td>74</td>
<td>76</td>
</tr>
<tr>
<td>84 + 15</td>
<td>84 + 20</td>
<td>104</td>
<td>99</td>
</tr>
<tr>
<td>127 + 24</td>
<td>130 + 24</td>
<td>154</td>
<td>151</td>
</tr>
<tr>
<td>359 + 32</td>
<td>360 + 32</td>
<td>392</td>
<td>391</td>
</tr>
<tr>
<td>487 – 19</td>
<td>487 – 20</td>
<td>467</td>
<td>468</td>
</tr>
<tr>
<td>549 – 25</td>
<td>550 – 25</td>
<td>525</td>
<td>524</td>
</tr>
<tr>
<td>272 + 66</td>
<td>270 + 66</td>
<td>336</td>
<td>338</td>
</tr>
<tr>
<td>399 + 17</td>
<td>400 + 17</td>
<td>417</td>
<td>416</td>
</tr>
<tr>
<td>221 – 33</td>
<td>220 – 33</td>
<td>187</td>
<td>188</td>
</tr>
<tr>
<td>317 – 19</td>
<td>320 – 19</td>
<td>301</td>
<td>298</td>
</tr>
</tbody>
</table>
1. Circle the numbers that round to 400.

- 392
- 342
- 350
- 380
- 399
- 349
- 408
- 468
- 450
- 449
- 305
- 475

2. Circle the numbers that round to 900.

- 1099
- 899
- 870
- 940
- 1010
- 876
- 832
- 949
- 901
- 990
- 950
- 842
- 1042
- 880

3. Circle the numbers that will round to 1300.

Underline the numbers that will round to 1400.

Round any remaining numbers to the nearest 100.
Write the rounded number below the numbers.

- 1456
- 1500
- 1428
- 1500
- 1375
- 1500
- 1555
- 1600

- 1399
- 1528
- 1357
- 1455

- 1045
- 1889
- 1328
- 1299

- 1599
- 1010
- 1488
- 1250

- 1302
- 1309
- 1444
- 1245

- 1350
- 1480
- 1333
- 1899

see Student Book page 12
1. Write the name of each shape inside it.

A Quadrilateral
B triangle
C quadrilateral
D pentagon
E hexagon
F parallelogram
G square
H hexagon
I rectangle
J hexagon
K triangle
L rhombus

2. Write the letters in the correct columns in the table to show which of the shapes are regular polygons and which are not.

<table>
<thead>
<tr>
<th>Regular polygons</th>
<th>Irregular polygons</th>
</tr>
</thead>
</table>

see Student Book page 13
Are these polygons? Colour all the polygons blue.

Colour any shapes that are not polygons red.

Remember: A polygon is a closed shape whose sides are straight lines.
Complete the table to summarise what you have learnt about polygons.

Use a dictionary to find out about any polygons you don’t know.

<table>
<thead>
<tr>
<th>Name and picture</th>
<th>Number of sides</th>
<th>Number of angles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triangle</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Square</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Pentagon</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Hexagon</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Heptagon</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Octagon</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Nonagon</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Decagon</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

see Student Book page 14
1. Use the 9-dot squares to draw as many different quadrilaterals as you can. There are 16 possibilities.

These are different.   These are not different, they are just in different positions.

2. Write the names of the quadrilaterals you have made.

3. Mark all the right angles.

see Student Book page 16
1. Trace this tangram onto card and cut out the pieces as accurately as you can. **own investigation**

![Tangram pieces](image)

2. Use two or more pieces to make these shapes.
   - a square
   - a rectangle
   - a pentagon
   - a hexagon

3. Can you make these shapes in more than one way?

see Student Book page 17
Complete the times

Show each time in three ways: digital, analogue and in words. Complete each set.

1. Three o’clock
   - Digital: 03:00
   - Analogue: [image of a clock showing 3 o’clock]
   - In words: Three o’clock

2. Half past one
   - Digital: 01:30
   - Analogue: [image of a clock showing 1:30]
   - In words: Half past one

3. Quarter to five
   - Digital: 04:45
   - Analogue: [image of a clock showing 4:45]
   - In words: Quarter to five

4. Twenty past eleven
   - Digital: 11:20
   - Analogue: [image of a clock showing 11:20]
   - In words: Twenty past eleven

5. Quarter past three
   - Digital: 03:15
   - Analogue: [image of a clock showing 3:15]
   - In words: Quarter past three

6. Twenty to seven
   - Digital: 06:40
   - Analogue: [image of a clock showing 6:40]
   - In words: Twenty to seven

7. Ten past eight
   - Digital: 08:10
   - Analogue: [image of a clock showing 8:10]
   - In words: Ten past eight

8. Twelve o’clock
   - Digital: 12:00
   - Analogue: [image of a clock showing 12:00]
   - In words: Twelve o’clock

see Student Book page 18
**Using a calendar**

1. **Fill in all the missing information on this calendar.**

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>FEBRUARY</th>
<th>March</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>6 7 8 9 10 11 12</td>
<td>1 2</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>6 7 8 9 10 11 12</td>
<td>13 14 15 16 17 18 19</td>
<td>3 4 5 6 7 8 9</td>
<td>7 8 9 10 11 12 13</td>
</tr>
<tr>
<td>10 11 12 13 14 15 16</td>
<td>17 18 19</td>
<td>10 11 12 13 14 15 16</td>
<td>14 15 16 17 18 19 20</td>
</tr>
<tr>
<td>20 21 22 23 24 25 26</td>
<td>17 18 19 20 21 22 23</td>
<td>17 18 19 20 21 22 23</td>
<td>21 22 23 24 25 26 27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>26 27 28 29 30 31</td>
<td>30 1 2 3 4 5 6</td>
<td>1 2 3</td>
</tr>
<tr>
<td>5 6 7 8 9 10 11</td>
<td>12 13 14 15 16 17 18</td>
<td>7 8 9 10 11 12 13</td>
<td>4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>19 20 21 22 23 24 25</td>
<td>19 20 21</td>
<td>14 15 16 17 18 19 20</td>
<td>11 12 13 14 15 16 17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>November</th>
<th>DECEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
<td>S M T W T F S</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5</td>
<td>1 2</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>8 9 10 11 12 13 14</td>
<td>13 14 15 16 17 18 19</td>
<td>3 4 5 6 7 8 9</td>
<td>8 9 10 11 12 13 14</td>
</tr>
<tr>
<td>15 16 17 18 19 20 21</td>
<td>13 14 15 16 17 18 19</td>
<td>10 11 12 13 14 15 16</td>
<td>15 16 17 18 19 20 21</td>
</tr>
<tr>
<td>29 30</td>
<td>27 28 29 30 31</td>
<td>24 25 26 27 28 29 30</td>
<td>29 30 31</td>
</tr>
</tbody>
</table>

2. **Write the day and date:**
   a. three weeks before 12 August ________ **2 September**
   b. 9 days after 13 December ________ **22 December**
   c. two weeks before 3 January ________ **20 December**
   d. 11 days after 12 March ________ **23 March**

3. **Was this a leap year or not? How do you know?**
   No. February only has 28 days

*see Student Book page 22*
Complete this timetable. Show what you do each day of the week.

<table>
<thead>
<tr>
<th></th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**own work**
1. Rewrite each fraction in decimal notation.

\[
\frac{1}{10} = 0.1 \quad \frac{2}{10} = 0.2 \quad \frac{3}{10} = 0.3 \quad \frac{4}{10} = 0.4 \quad \frac{5}{10} = 0.5 \\
\frac{6}{10} = 0.6 \quad \frac{7}{10} = 0.7 \quad \frac{8}{10} = 0.8 \quad \frac{9}{10} = 0.9 \quad \frac{10}{10} = 1.0
\]

2. Complete each number line.

a. 
\[0 \quad 0.1 \quad 0.2 \quad 0.3 \quad 0.4 \quad 0.5 \quad 0.6 \quad 0.7 \quad 0.8 \quad 0.9 \quad 1 \quad 1.1 \quad 1.2 \quad 1.3 \quad 1.4 \quad 1.5\]

b. 
\[2.6 \quad 2.7 \quad 2.8 \quad 2.9 \quad 3 \quad 3.1 \quad 3.2 \quad 3.3\]

c. 
\[7.9 \quad 8 \quad 8.1 \quad 8.2 \quad 8.3 \quad 8.4\]

d. 
\[10 \quad 10.1 \quad 10.2 \quad 10.3 \quad 10.4 \quad 10.5 \quad 10.6\]

e. 
\[27.4 \quad 27.5 \quad 27.6 \quad 27.7 \quad 27.8 \quad 27.9 \quad 28 \quad 28.1 \quad 28.2\]

3. Shade the correct fraction of each shape.

a. 0.5

b. 0.7

c. 0.1

d. 1.5
1. This number line is marked in tenths.

![Number line diagram]

Arrow A is pointing to 7.2

Which numbers are these arrows pointing to?

- Arrow B 7.5
- Arrow C 8.1
- Arrow D 9.2

2. Complete this number line.

![Number line diagram]

Show these numbers.

- a 4.2
- b 3.6
- c 4.9
- d 3.1

3. Make your own number line in the space below.

Mark it in tenths.

Ask a partner to mark some decimals on it.

Check the answers together.

own work

see Student Book page 26
Put them in order

This is a number line with the numbers missing.

A, B and C show the positions of three decimal numbers.

A is 2.5   B is 3.3   C is 4.2

Draw a line to match each decimal number to the correct letter.

1. 5.3, 7.4, 6.5
2. 9.3, 1.2, 8.7
3. 20.5, 26.1, 15.7
4. 25.3, 10.5, 11.2
5. 1.3, 4.9, 2.5
6. 16.8, 8.3, 25.6
7. 12.3, 73.1, 22.5
8. 62.5, 1.7, 73.4

see Student Book page 27
Comparing decimal amounts

1 Circle the smallest amount in each set.
Underline the largest amount.

<table>
<thead>
<tr>
<th>Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2 l, 7.7 l, 6.5 l, 9.6 l, 7.2 l</td>
</tr>
<tr>
<td>1.2 m, 2.1 m, 2.5 m, 1.5 m</td>
</tr>
<tr>
<td>$4.58, $4.85, $5.48, $5.84</td>
</tr>
<tr>
<td>$12.34, $1.24, $12.00, $123.40</td>
</tr>
<tr>
<td>14.0 kg, 14.4 kg, 0.14 kg, 0.04 kg</td>
</tr>
<tr>
<td>12.35 m, 123.0 m, 123.5 m, 1.25 m</td>
</tr>
<tr>
<td>5.51 kg, 3.75 kg, 7.35 kg, 5.73 kg</td>
</tr>
<tr>
<td>2.37 kg, 2.73 kg, 2.07 kg, 2.3 kg</td>
</tr>
</tbody>
</table>

2 How much money will you need to add to each amount to get $10.00? Write your answers in decimal notation.

<table>
<thead>
<tr>
<th>Amounts</th>
<th>How much to add</th>
</tr>
</thead>
<tbody>
<tr>
<td>a $4.50</td>
<td>$5.50</td>
</tr>
<tr>
<td>b $2.80</td>
<td>$7.20</td>
</tr>
<tr>
<td>c $7.50</td>
<td>$2.50</td>
</tr>
<tr>
<td>d $9.50</td>
<td>$0.50</td>
</tr>
<tr>
<td>e $5.25</td>
<td>$4.75</td>
</tr>
<tr>
<td>f $6.75</td>
<td>$3.25</td>
</tr>
</tbody>
</table>

see Student Book page 29
What should I use?

The picture shows instruments that are used to measure length.

What would you use to measure the items in the table?

Tick the correct column in the table for each item, and write m, cm or km in the Units column.

<table>
<thead>
<tr>
<th>Item</th>
<th>Measuring instrument</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ruler</td>
<td>Trundle wheel</td>
</tr>
<tr>
<td>Netball court</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pencil</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Path</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>A belt</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Your friend’s height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance around a tree trunk</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Width of computer screen</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Using millimetres on a ruler helps to measure a little more accurately.

This line is 5 cm to the nearest centimetre.

Using a more accurate ruler the line is about 5 cm 3 mm long. It is 5 cm 3 mm to the nearest millimetre. 5 cm 3 mm can be written as 5.3 cm.

Measure these lines to the nearest millimetre.

Write their measurements in two ways.

1

\[ \underline{2} \text{ cm} \underline{9} \text{ mm} \]

\[ \underline{2.9} \text{ cm} \]

2

\[ \underline{3} \text{ cm} \underline{8} \text{ mm} \]

\[ \underline{3.8} \text{ cm} \]

3

\[ \underline{6} \text{ cm} \underline{2} \text{ mm} \]

\[ \underline{6.2} \text{ cm} \]

4

\[ \underline{5} \text{ cm} \underline{4} \text{ mm} \]

\[ \underline{5.4} \text{ cm} \]

5

\[ \underline{2} \text{ cm} \underline{1} \text{ mm} \]

\[ \underline{2.1} \text{ cm} \]

see Student Book page 32
1. Estimate how much 1 litre of water weighs.

Use your measurement to complete the chart.

Then check your answers by weighing.

<table>
<thead>
<tr>
<th>Water</th>
<th>Estimate</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 litre</td>
<td></td>
<td>1 kg</td>
</tr>
<tr>
<td>(\frac{1}{2}) litre</td>
<td></td>
<td>500 g</td>
</tr>
<tr>
<td>100 ml</td>
<td></td>
<td>100 g</td>
</tr>
<tr>
<td>2 litres</td>
<td></td>
<td>2000 g/2 kg</td>
</tr>
</tbody>
</table>

2. Estimate the weight of each item. Then estimate the weights of some small items in your classroom.

Check your answers by actually weighing the items.

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimate</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A satchel full of books</td>
<td>own work</td>
<td></td>
</tr>
<tr>
<td>Two maths books</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A pair of shoes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A full lunch box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An empty lunch box</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Shade each container to show where the level of the liquid will be if you add 150 ml to each one.

Write the amount of liquid in each jug in millilitres and in litres.

1. \[
\begin{align*}
&950 \text{ ml} \\
&0.95 \text{ l}
\end{align*}
\]

2. \[
\begin{align*}
&225 \text{ ml} \\
&0.225 \text{ l}
\end{align*}
\]

3. \[
\begin{align*}
&850 \text{ ml} \\
&0.85 \text{ l}
\end{align*}
\]

4. \[
\begin{align*}
&400 \text{ ml} \\
&0.4 \text{ l}
\end{align*}
\]

5. \[
\begin{align*}
&600 \text{ ml} \\
&0.6 \text{ l}
\end{align*}
\]

6. \[
\begin{align*}
&500 \text{ ml} \\
&0.5 \text{ l}
\end{align*}
\]

see Student Book page 37
How much does it weigh?

Draw in the needle to show each mass.

1. 3 kg

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

3. 1.25 kg

4. 3.5 kg

5. 4 kg 250 g

6. 2 kg 750 g

see Student Book page 37
1. Look for patterns and then count on or back to find the missing numbers on each number line.

   a. 8467 8466 8465 8464 8463 8462 8461

   b. 2010 2020 2030 2040 2050 2060 2070

   c. 4210 4110 4010 3910 3810 3710 3610

   d. 2700 3700 4700 5700 6700 7700 8700

2. Follow the instructions on the track and fill in the missing numbers.

   2642 + 1 → 2643 + 100 → 2743 - 1000 → 1743

   2733 - 100 → 2833 + 1 → 2832 + 1000 → 1832 + 100 → 1732

3. Write the correct numbers in the boxes.

   4000 + 1000 = 5000  3430 - 1000 = 2430

   3450 + 1000 = 4450  2080 - 1000 = 1080

   8999 + 1000 = 9999  1999 - 1000 = 999

see Student Book page 38
1 Sonja cut 100 cm long pieces of ribbon into two pieces. The length of one piece is given. Write the length of the other piece.

2 Complete the additions. Then write two subtraction facts to match each addition fact. The first one has been done as an example.

21 + 79 = 100   100 – 21 = 79   100 – 79 = 21
25 + 75 = 100   100 – 25 = 75   100 – 75 = 25
42 + 58 = 100   100 – 42 = 58   100 – 58 = 42
51 + 49 = 100   100 – 51 = 49   100 – 49 = 51
64 + 36 = 100   100 – 64 = 36   100 – 36 = 64
10 + 90 = 100   100 – 10 = 90   100 – 90 = 10
87 + 13 = 100   100 – 13 = 87   100 – 87 = 13
52 + 48 = 100   100 – 48 = 52   100 – 52 = 48
23 + 77 = 100   100 – 23 = 77   100 – 77 = 23

3 How many more cents would each person need to have one dollar?

- 25c
- 18c
- 59c
- 72c
- 75c
- 82c
- 41c
- 28c

see Student Book page 40
Start by writing 7 in the upper left square.

When you follow an arrow to the right (→), add 3.
When you follow an arrow down (↓), add 8.

When you have completed the chart, look for patterns in the numbers.

Make a list of them.

Complete another chart with your own starting number and rules.

For example, start with 83; (→) means +2, (↓) means −5.

---

a. All horizontal lines increase by 3 with each number (left to right).
b. All vertical lines increase by 8 (top to bottom).
c. All diagonals increase by 11 (top left to bottom right).

---

see Student Book page 42
Symmetrical designs

You can use dotted paper to make a symmetrical rangoli design.

1. Draw the lines of symmetry on this pattern and then colour it. Your colouring should be symmetrical.

2. Find an example of a symmetrical design that you like. This could be a cultural design, a logo on a T-shirt, a fabric pattern or a tile pattern. Draw the design on this grid.

see Student Book page 47
You will need a die to complete this activity.

1. Throw a die and move that number of places around the track.
   Start on any square. Move clockwise.
   Use the tally table to record the shapes you land on.
   Repeat this for 20 throws of the die.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triangle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectangle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentagon</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Complete this bar graph to show your results.
   own graph

3. Compare graphs with a partner.
   a. How are the graphs similar?
   b. How are they different?

   own investigation

see Student Book page 52
### Use this grid for activity 1

**Grid A**

<table>
<thead>
<tr>
<th>Students’ hair colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Dark brown</td>
</tr>
<tr>
<td>Light brown</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

**Key** 🧑‍♂️ = 2 students

### Use this grid for activity 2

**Grid B**

<table>
<thead>
<tr>
<th>Books read in holidays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyrill</td>
</tr>
<tr>
<td>Zarah</td>
</tr>
<tr>
<td>Amani</td>
</tr>
<tr>
<td>Maria</td>
</tr>
<tr>
<td>Josh</td>
</tr>
<tr>
<td>Petar</td>
</tr>
</tbody>
</table>

**Key** 📚 = 4 books
1 Use this 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>1</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</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>
<td></td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

a Count in 2s. Colour in each number you count. These are multiples of 2.
b Count in 4s. Circle each number you count. These are multiples of 4.

c What patterns can you see in your table now?

Every second multiple of two is also a multiple of four.
All multiples of four are also multiples of two.

d How are the multiples of 2 and the multiples of 4 connected?

$2 \times 2 = 4$ so a multiple of four is equivalent to two multiples of two.

e Are any of the numbers you coloured or circled odd numbers? What does this tell you about multiples of 2 and 4?

No They are all even.

2 Complete this multiplication table for the 4× 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>4</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>40</td>
</tr>
</tbody>
</table>
This is a multiplication strip showing multiples of four.

<table>
<thead>
<tr>
<th>×</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>8</td>
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<td>16</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>40</td>
</tr>
</tbody>
</table>

1 These table strips have some numbers missing.

Fill in the missing numbers as quickly as you can.

a

<table>
<thead>
<tr>
<th>×</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
<td>50</td>
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</tbody>
</table>

b

<table>
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<th>6</th>
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<td>12</td>
<td>14</td>
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</tbody>
</table>

c

<table>
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<td>18</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>48</td>
<td>54</td>
<td>60</td>
</tr>
</tbody>
</table>

d

<table>
<thead>
<tr>
<th>×</th>
<th>1</th>
<th>2</th>
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<th>4</th>
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<tbody>
<tr>
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<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>
<td>90</td>
</tr>
</tbody>
</table>

e

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>3</td>
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<td>9</td>
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<td>21</td>
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<td>27</td>
<td>30</td>
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</tbody>
</table>

f

<table>
<thead>
<tr>
<th>×</th>
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<tbody>
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<td>30</td>
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<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

2 Look at the multiples of 5 and the multiples of 10 in your tables.

a How can you tell if a number is a multiple of 10 by looking at it? It ends in 0

b How can you tell if a number is a multiple of 5 by looking at it? It ends in 5 or 0

c Circle the multiples of 5. Underline the multiples of 10.

12 15 20 40 52 64 65 80 88 91 95

see Student Book page 59
What can you remember?

Harjinder has filled in all the multiplication facts he can remember quickly.

For example, he knows:

\[8 \times 4 = 32, \quad 4 \times 8 = 32\]

1. You can use the tables square to help you practise multiplication.

   a. Complete the tables square.

   b. Ask a friend to test you, using the tables square to find multiplication questions.
      You can also use the square to check the answers.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>
This card has 7, 8 and 56 on it because $7 \times 8 = 56$

These cards are similar, but one number has been left out on each.

1. Write the missing numbers.

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>45</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>7</td>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td>g</td>
<td>7</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>j</td>
<td>7</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>m</td>
<td>8</td>
<td>72</td>
<td>9</td>
</tr>
<tr>
<td>p</td>
<td>8</td>
<td>64</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>d</th>
<th>e</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td>63</td>
<td>7</td>
</tr>
<tr>
<td>h</td>
<td>8</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>k</td>
<td>6</td>
<td>42</td>
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</tr>
<tr>
<td>n</td>
<td>8</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td>q</td>
<td>6</td>
<td>54</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>e</th>
<th>f</th>
<th>g</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>56</td>
<td>7</td>
</tr>
<tr>
<td>i</td>
<td>6</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>l</td>
<td>5</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>o</td>
<td>6</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>r</td>
<td>4</td>
<td>24</td>
<td>6</td>
</tr>
</tbody>
</table>

2. Complete these tables of division facts.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>÷2</td>
<td>12</td>
<td>÷2</td>
</tr>
<tr>
<td></td>
<td>÷3</td>
<td>8</td>
<td>÷3</td>
</tr>
<tr>
<td></td>
<td>÷4</td>
<td>6</td>
<td>÷5</td>
</tr>
<tr>
<td></td>
<td>÷6</td>
<td>4</td>
<td>÷6</td>
</tr>
<tr>
<td></td>
<td>÷8</td>
<td>3</td>
<td>÷10</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>40</th>
<th>÷2</th>
<th>20</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>÷4</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>÷5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>÷8</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>÷10</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

see Student Book page 63
Build a tetrahedron

Trace or copy this net. Use it to build a tetrahedron.

see Student Book page 66
1 Fill in the numbers on each number line.

a

\[ -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \]

b

\[ -80 \quad -70 \quad -60 \quad -50 \quad -40 \quad -30 \quad -20 \quad -10 \quad 0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \]

c

\[ -25 \quad -20 \quad -15 \quad -10 \quad -5 \quad 0 \quad 5 \quad 10 \quad 15 \quad 20 \quad 25 \]

2 Count back in steps to complete these number patterns. Use the number lines above to help you.

<table>
<thead>
<tr>
<th>30</th>
<th>20</th>
<th>10</th>
<th>0</th>
<th>-10</th>
<th>-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>-5</td>
<td>-10</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>-4</td>
<td>-8</td>
</tr>
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<td>-15</td>
<td>-20</td>
<td>-25</td>
<td>-30</td>
<td>-35</td>
</tr>
<tr>
<td>-16</td>
<td>-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>20</td>
<td>-80</td>
<td>-180</td>
<td>-280</td>
<td>-380</td>
</tr>
</tbody>
</table>

3 Complete this number chain:

12 \quad -2 \quad 10 \quad +4 \quad 14 \quad -6 \quad 8

-10

-2

+4

12 \quad -10 \quad -2 \quad 0 \quad -2 \quad 2

see Student Book page 69
1 Each of these pictures show a quarter of a whole shape.

Draw the whole shape.

\[ \text{a} \quad \text{b} \]
\[ \text{c} \quad \text{d} \]
\[ \text{e} \quad \text{f} \]

other solutions are possible

see Student Book page 73
1. Fill in the correct fractions.

   a. \( \frac{2}{3} \) of the children have dark hair.

   b. \( \frac{5}{24} \) of the group have striped tops.

   c. \( \frac{11}{24} \) of the children are girls.

   d. \( \frac{3}{11} \) of the girls are wearing dark-coloured shoes.

   e. \( \frac{5}{12} \) of the whole group are wearing dark-coloured shoes.

   f. \( \frac{1}{2} \) of the children with fair hair are wearing long trousers.

   g. \( \frac{1}{4} \) of the children with dark hair have their hair tied up.

   h. \( \frac{5}{24} \) of the children are wearing shorts.

2. Make up some problems of your own about this picture.

   Try them on some other students.

   own work
Find the equivalent fractions

These pictures show equivalent (equal) fractions.

\[
\frac{1}{2} = \frac{3}{6} \quad \text{and} \quad \frac{2}{3} = \frac{6}{9}
\]

1. Write the equivalent fractions shown in these pictures.

a. \(\frac{1}{3} = \frac{4}{8}\)  

b. \(\frac{2}{5} = \frac{4}{10}\)  

c. \(\frac{2}{3} = \frac{4}{6}\)  

d. \(\frac{1}{2} = \frac{3}{6}\)  

e. \(\frac{1}{4} = \frac{2}{8}\)  

f. \(\frac{1}{4} = \frac{3}{12}\)

2. Write two equivalent fractions for each picture.

a. \(\frac{2}{3} = \frac{4}{6} = \frac{8}{12}\)  

b. \(\frac{3}{4} = \frac{6}{8} = \frac{9}{12}\)  

c. \(\frac{1}{3} = \frac{3}{9} = \frac{9}{27}\)

3. Draw your own fraction shapes, and write equivalent fractions for them. You can divide up these shapes to make your fractions.

a.  

b.  

c.  

see Student Book page 75
1. Draw a picture to show the equivalent fractions.
   a. \( \frac{1}{2} = \frac{2}{4} \)
   b. \( \frac{3}{5} = \frac{6}{10} \)
   c. \( \frac{2}{3} = \frac{8}{12} \)

2. Fill in the missing fractions on each number line. Use them to complete the equivalent fractions.
   a. \( \frac{1}{4} = \frac{2}{8} \)
   b. \( \frac{1}{2} = \frac{2}{4} \)
   c. \( \frac{6}{8} = \frac{3}{4} \)
   d. \( \frac{8}{8} = \frac{4}{4} = \frac{2}{2} \)

3. Colour each shape to match the fraction given. For each one write an equivalent fraction.
   a. \( \frac{4}{5} = \frac{8}{10} \)
   b. \( \frac{6}{8} = \frac{3}{4} \)
   c. \( \frac{1}{4} = \frac{2}{8} \)
1. What fraction is shaded?

Choose the correct fraction and circle it.

a. \( \frac{1}{4} \) \( \frac{1}{5} \) \( \frac{2}{5} \) \( \frac{1}{6} \)

b. \( \frac{3}{4} \) \( \frac{1}{4} \) \( \frac{1}{4} \) \( 2\frac{3}{4} \)

c. \( \frac{2}{3} \) \( \frac{1}{4} \) \( \frac{1}{2} \) \( \frac{2}{4} \)

2. How much of the set is shaded?

a. \( \frac{2}{5} \) \( \frac{1}{5} \) \( \frac{3}{5} \) \( \frac{1}{5} \)

b. \( \frac{4}{8} \) \( \frac{5}{8} \) \( \frac{3}{8} \) \( \frac{2}{8} \)

c. \( \frac{3}{6} \) \( \frac{1}{6} \) \( \frac{3}{4} \) \( \frac{1}{5} \)

3. What is the missing numerator?

\( \frac{3}{5} = \frac{6}{10} \)

4. What is the missing denominator?

\( \frac{2}{4} = \frac{4}{8} \)

see Student Book page 77
1. How much is shaded? Write your answer as a decimal.

   a. \[
   \begin{array}{c}
   \hline
   \text{ } \\
   \hline
   \text{ } \\
   \hline
   \end{array}
   \]
   \[
   \frac{1}{4} = 0.25
   \]
   
   b. \[
   \begin{array}{c}
   \hline
   \hline
   \hline
   \hline
   \end{array}
   \]
   \[
   \frac{7}{10} = 0.7
   \]
   
   c. \[
   \begin{array}{c}
   \hline
   \hline
   \hline
   \hline
   \end{array}
   \]
   \[
   2\frac{5}{10} = 2.5
   \]

2. How much is shaded? Write a fraction and a decimal.

   a. \[
   \begin{array}{c}
   \hline
   \end{array}
   \]
   
   b. \[
   \begin{array}{c}
   \hline
   \end{array}
   \]
   
   c. \[
   \begin{array}{c}
   \hline
   \end{array}
   \]

3. Colour the given fraction of each square.

   a. \[
   \begin{array}{c}
   \hline
   \hline
   \end{array}
   \]
   \[\frac{1}{2}\]

   b. \[
   \begin{array}{c}
   \hline
   \hline
   \end{array}
   \]
   \[\frac{3}{4}\]

   c. \[
   \begin{array}{c}
   \hline
   \hline
   \end{array}
   \]
   \[\frac{7}{10}\]

   d. \[
   \begin{array}{c}
   \hline
   \hline
   \end{array}
   \]
   \[\frac{35}{100}\]

4. Mark the position of each fraction you shaded on this number line.

   0 \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.1\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.2\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.3\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.4\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.5\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.6\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.7\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.8\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[0.9\] \[\begin{array}{c}
   \hline
   \end{array}\]
   \[1\]

see Student Book page 78
1. For each set, write the fraction that is coloured as a mixed number.

- $2\frac{1}{2}$
- $2\frac{5}{8}$
- $1\frac{1}{4}$

2. Write the mixed numbers in the correct position on this number line.

3. The mixed numbers below have fallen off the number line. Write the correct mixed number next to each marked point.

4. Tell your partner how you decided where each mixed number should go on the number line.

Discussion

see Student Book page 79
Use the map to answer these questions.

1. What would you find at (15, 5)? ____________ Tigers

2. Write the ordered pairs to give the position of the entrance to the silver, diamond and gold mines. (The entrance to each mine is where the road ends.)
   - silver mine (3, 5)
   - diamond mine (3, 14)
   - gold mine (10, 12)
Use the map on the previous page to answer these questions.

1. a Where does the safe path through the swamp start and finish?
   Start: (10, 5)
   Finish: (11, 8)

b If you went to (8, 14) what danger would await you?
   Leopards

c Write the ordered pairs to direct a friend from the camp to the opals.
   Use the stepping stones and avoid the tigers. Start between (7, 1) and (8, 1) at the campsite. Advance forward to the stepping stones at (12, 1). Go back to (10, 4) and go over the stepping stones to (11, 9). Turn right to get to the opals at (13, 8)

d If you moved five blocks left at (10, 8) where would you be?
   The great green swamp

e Use ordered pairs to describe the route from the diamond mine back to the camp.
   You must use the path and the wibbly bridge.
   own work

f Find the shortest, safest route from the gold mine back to the camp.
   Write the ordered pairs for a friend to try.
   own work

see Student Book page 81
1. Draw the routes. Answer the questions.
   a. Amira goes from her house three blocks south and then three blocks east. Where is she going?  **Cho’s house**
   b. Mohammed leaves his house. He goes one block south and then three blocks east, then one block north and two blocks east. Where is he going?  **Susan’s house**

2. Draw a route from the library to Sami’s house. Write the directions.
   own work

3. Draw a route from Susan’s house to the park. Write the directions.
   own work

see Student Book page 82
Finding your way

1. Start from the circle and follow the directions. Draw each path.
   a. west 3  
      north 2  
      east 2  
      north 3  
      west 2  
      south 1  
      west 1  
      north 2  
      east 4  
      north 1  

   b. south 3  
      east 2  
      north 4  
      west 2  
      south 5  
      east 4  
      south 1  
      west 4  

   c. east 2  
      south 2  
      east 2  
      south 2  
      west 4  
      south 2  
      east 2  
      north 1  
      east 2  
      south 2  
      west 4  

   d. south 2  
      east 2  
      north 3  
      west 2  
      north 2  
      west 2  
      south 3  
      east 1  
      north 4  
      east 3  
      south 2  

2. Draw your own path.
   Write the directions.
   own work
   __________  
   __________

see Student Book page 83
Only one path will get to the tree.

Find and draw the correct path for each maze.

Write directions from the gate to the tree.
Find the missing numbers in these pictures.
Work out the answers in your head.

1. $17 + 24 = 41$
2. $26 + 36 = 62$
3. $37 + 48 = 85$
4. $48 + 56 = 104$
5. $59 + 32 = 91$
6. $63 + 19 = 82$
7. $75 + 27 = 102$
8. $84 + 33 = 117$
9. $92 + 19 = 111$
10. $41 + 39 = 80$

see Student Book page 84
Complete the number machines.

1. 
   - In: 27, 49, 98
   - Out: 46, 68, 117
   - Operation: +19

2. 
   - In: 67, 85, 12
   - Out: 88, 106, 33
   - Operation: +21

3. 
   - In: 14, 29, 77
   - Out: 5, 20, 68
   - Operation: -9

4. 
   - In: 42, 485
   - Out: 206, 307, 586
   - Operation: +101

5. 
   - In: 850, 521, 700
   - Out: 117, 419, 598
   - Operation: -102

6. 
   - In: 741, 605, 400
   - Out: 143, 554, 213
   - Operation: -187

7. 
   - In: 388, 351
   - Out: 597, 560, 125
   - Operation: +209

8. 
   - In: 199, 551
   - Out: 75, 427, 538
   - Operation: -124

see Student Book page 88
Complete the number wheels. Each pair of numbers between the spokes should add up to the number in the middle. The first space is done for you.

1

2

3

4

5

6

see Student Book page 89
Pyramid numbers

Put numbers in the empty boxes to make pyramid numbers.

Look out for the signs. Add two boxes side by side to make the number above or find the difference between the two numbers to make the number above.

1. + 1439
   522
   917
   129
   393
   524
   213
   84
   309
   215

2. + 1689
   647
   1042
   147
   500
   542
   228
   81
   419
   126

3. 202
   581
   379
   106
   687
   308
   255
   149
   836
   528

4. 72
   104
   32
   82
   186
   218
   263
   181
   367
   149

5. + 2127
   991
   1136
   398
   593
   543
   133
   265
   328
   215

6. Use this shape to make your own pyramid.

see Student Book page 91
1. Measure the length and breadth of each rectangle. Write the measurements on the diagrams.

2. Calculate the perimeter of each rectangle. Remember to write the units as well.

   \[
   \text{Perimeter} = 188 \text{ mm} \\
   \text{Perimeter} = 150 \text{ mm} \\
   \text{Perimeter} = 136 \text{ mm} \\
   \text{Perimeter} = 120 \text{ mm} \\
   \text{Perimeter} = 152 \text{ mm} \\
   \text{Perimeter} = 212 \text{ mm}
   \]

see Student Book page 92
Draw as many rectangles as you can with a perimeter of 24 cm.

see Student Book page 92
Investigating area

Which of these shapes has an area of 10 cm²? A

Draw two different shapes on the grid each with an area of 10 cm². own diagrams

Draw three different rectangles that have an area of 12 cm².

1 \times 12

2 \times 6

3 \times 4

Draw shapes with these areas: own diagrams

a 15 cm²  b 11 cm²  c 18 cm²

see Student Book page 93
Find the area of each shape.

Tell your partner how you worked out each area.

- 6 cm²
- 15 cm²
- 13 cm²
- 6 cm²
- 7 cm²
- 13 cm²
- 26 cm²
- 26 cm²
- 7 cm²
- 15 cm²

see Student Book page 93
Write whether the end number is odd or even in each pattern.

\[
\begin{align*}
\text{odd} & + \text{odd} + \text{odd} + \text{odd} + \text{even} = \text{even} \\
\text{even} & + \text{even} + \text{odd} + \text{odd} + \text{odd} = \text{odd} \\
\text{odd} & + \text{odd} + \text{even} - \text{even} + \text{odd} = \text{odd} \\
\text{odd} & - \text{odd} - \text{odd} - \text{odd} = \text{even} \\
\text{even} & - \text{even} - \text{even} - \text{even} = \text{even} \\
\text{even} & - \text{odd} + \text{odd} + \text{even} = \text{even} \\
\text{odd} & - \text{odd} - \text{even} + \text{even} = \text{even}
\end{align*}
\]

see Student Book page 95
1. Mthunzi made some number patterns by counting on or back in steps of the same size. Work out what steps he used and fill in the missing numbers in each pattern.

- 142, 146, 150, 154, 158, 162
- 120, 125, 130, 135, 140, 145
- 80, 120, 160, 200, 240, 280
- 75, 78, 81, 84, 87, 90, 93
- 154, 151, 148, 145, 142, 139, 136

2. Use words to describe each pattern.

- Increasing in fives: 125, 130, 135, 140
- Increasing in hundreds: 520, 620, 720, 820
- Decreasing in hundreds: 999, 899, 799, 699
- Decreasing in tens: 179, 169, 159, 149

3. Continue each number pattern by following the rule.

- Add 100: 423, 523, 623, 723, 823
- Subtract 10: 325, 315, 305, 295, 285
- Subtract 5: 185, 180, 175, 170, 165
- Add 50: 230, 280, 330, 380, 430

see Student Book page 97
Tick the blocks that apply to each number.

<table>
<thead>
<tr>
<th>Number</th>
<th>Multiple of 5</th>
<th>Multiple of 10</th>
<th>Multiple of 5 and 10</th>
<th>Multiple of 100</th>
<th>Multiple of 10 and 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>450</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>876</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>480</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>525</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>405</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>600</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1000</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Comparing angles

Use the angles on this page to complete the activities on page 64.

Use the angle measuring tool you made in class to help you.
Comparing angles continued

Use the angles on page 63 for these activities.

1. Which angle is the smallest? \(N\)
2. Which angle is the biggest? \(C\)
3. Use this table to sort the angles.

<table>
<thead>
<tr>
<th>Smaller than a right angle</th>
<th>Right angle</th>
<th>Larger than a right angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  D  F  I  L</td>
<td>G</td>
<td>B  C  E  H</td>
</tr>
<tr>
<td>N  O</td>
<td></td>
<td>J  K  M</td>
</tr>
</tbody>
</table>

4. List the angles in order from smallest to biggest.

\[
\begin{align*}
N & \quad A & \quad F & \quad I & \quad L \\
D & \quad O & \quad G & \quad B & \quad J \\
M & \quad H & \quad E & \quad K & \quad C
\end{align*}
\]

5. Draw an angle that is:
   a. smaller than this one
   b. bigger than this one.

\[\text{own diagrams}\]

see Student Book page 100
Revise multiplication facts.

Complete each set of cards.

- $5 \times 7$ and $7 \times 5$ (5 lots of seven) = 35
- $9 \times 6$ and $6 \times 9$ (6 lots of 9) = 54
- $3 \times 10$ and $10 \times 3$ (3 lots of 10) = 30
- $9 \times 7$ and $7 \times 9$ (9 lots of 7) = 63
- $6 \times 8$ and $8 \times 6$ (6 lots of 8) = 48
- $5 \times 10$ and $10 \times 5$ (5 lots of 10) = 50
- $9 \times 9$ (9 lots of 9) = 81

see Student Book page 101
Jumping in tens

Complete each number chain.

a. $5 \times 10 \rightarrow 50 \times 10 \rightarrow 500$

b. $23 \times 10 \rightarrow 230 \times 10 \rightarrow 2300$

c. $77 \times 10 \rightarrow 770 \times 10 \rightarrow 7700$

d. $39 \times 10 \rightarrow 390 + 5 \times 10 \rightarrow 3950$

e. $121 \times 10 \rightarrow 1210 - 1000 \times 10 \rightarrow 2100$

f. $426 \times 10 \rightarrow 4260 - 4000 \times 10 \rightarrow 2600$

g. $509 \times 10 \rightarrow 5090 - 5000 \times 10 \rightarrow 900$

see Student Book page 103
There are 100 cm in 1 metre.

To change a measurement from metres to centimetres you have to multiply it by 100.

1 Write each of these metre lengths in centimetres.

- \(4 \text{m} = 400 \text{ cm}\)
- \(23 \text{m} = 2300 \text{ cm}\)
- \(73 \text{m} = 7300 \text{ cm}\)
- \(99 \text{m} = 9900 \text{ cm}\)

2 How tall is each tree in centimetres?

- \(2 \text{m} = 200 \text{ cm}\)
- \(3 \text{m} = 300 \text{ cm}\)
- \(27 \text{m} = 2700 \text{ cm}\)
- \(23 \text{m} = 2300 \text{ cm}\)

see Student Book page 104
1. Fill in the missing numbers.

<table>
<thead>
<tr>
<th>Input</th>
<th>DOUBLE</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>77</td>
<td></td>
<td>154</td>
</tr>
<tr>
<td>59</td>
<td></td>
<td>118</td>
</tr>
<tr>
<td>64</td>
<td></td>
<td>512</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td>240</td>
</tr>
<tr>
<td>150</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>370</td>
<td></td>
<td>740</td>
</tr>
<tr>
<td>490</td>
<td></td>
<td>980</td>
</tr>
<tr>
<td>1200</td>
<td></td>
<td>2400</td>
</tr>
<tr>
<td>1700</td>
<td></td>
<td>3400</td>
</tr>
<tr>
<td>4700</td>
<td></td>
<td>9400</td>
</tr>
</tbody>
</table>

2. Daniel needs these ingredients to make enough cake for 6 people. Write how much of each ingredient he will need to make twice as much cake.

- **Vanilla Cake**
  - 500 ml sugar
  - 4 eggs
  - 650 ml flour
  - 250 ml milk
  - 175 ml vegetable oil
  - 12 ml baking powder
  - 5 ml vanilla

see Student Book page 105
### 1 Fill in the missing numbers.

<table>
<thead>
<tr>
<th>12</th>
<th>68</th>
<th>18</th>
<th>34</th>
<th>76</th>
<th>50</th>
<th>62</th>
<th>120</th>
<th>150</th>
<th>370</th>
<th>490</th>
<th>1200</th>
<th>1700</th>
<th>4700</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>34</td>
<td>9</td>
<td>17</td>
<td>38</td>
<td>25</td>
<td>31</td>
<td>60</td>
<td>75</td>
<td>185</td>
<td>245</td>
<td>600</td>
<td>850</td>
<td>2350</td>
</tr>
<tr>
<td>4700</td>
<td>1700</td>
<td>1200</td>
<td>150</td>
<td>370</td>
<td>490</td>
<td>62</td>
<td>120</td>
<td>150</td>
<td>370</td>
<td>490</td>
<td>1200</td>
<td>1700</td>
<td>4700</td>
</tr>
</tbody>
</table>

### 2 The total distance from A to B and back again is given for each journey. Work out the distance from A to B.

- **24 km**
  - A: 48 km
  - B: 24 km

- **65 km**
  - A: 130 km
  - B: 65 km

- **195 km**
  - A: 390 km
  - B: 195 km

- **2300 km**
  - A: 2300 km
  - B: 1150 km

- **3700 km**
  - A: 3700 km
  - B: 1850 km

See Student Book page 106
Multiplication

Colour each row the correct colour.

<table>
<thead>
<tr>
<th></th>
<th>25</th>
<th>55</th>
<th>75</th>
<th>15</th>
<th>35</th>
<th>65</th>
<th>red</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>59</td>
<td>79</td>
<td>19</td>
<td>39</td>
<td>69</td>
<td>yellow</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>52</td>
<td>72</td>
<td>12</td>
<td>32</td>
<td>62</td>
<td>blue</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>50</td>
<td>70</td>
<td>10</td>
<td>30</td>
<td>60</td>
<td>green</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>56</td>
<td>76</td>
<td>16</td>
<td>36</td>
<td>66</td>
<td>purple</td>
<td></td>
</tr>
</tbody>
</table>

Write the numbers.

1. a Multiply the numbers in the blue row by 3.  66, 156, 216, 36, 96, 186
   b Multiply the numbers in the yellow row by 6.  174, 354, 474, 114, 234, 414
   c Could you find a quick way to help you? Discussion

2. a Multiply the green row by 10.  200, 500, 700, 100, 300, 600
   b What happens to the numbers? The digits move one place left
   c Double the red numbers. What do you notice? They become multiples of 10 (All end in 0)

3. a Multiply the purple numbers by 4.  104, 224, 304, 64, 144, 264
   b What do you notice about the last digit of each number? They all end in 4

see Student Book page 107
Complete these multiplications. Then describe the pattern you notice.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>In this set, I noticed this pattern:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50 \times 1 = 50</td>
<td>Discussion – own ideas</td>
</tr>
<tr>
<td></td>
<td>50 \times 2 = 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 3 = 150</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 4 = 200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 5 = 250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 6 = 300</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 7 = 350</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 8 = 400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 9 = 450</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 \times 10 = 500</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>55 \times 1 = 55</td>
<td>Discussion – own ideas</td>
</tr>
<tr>
<td></td>
<td>55 \times 2 = 110</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 3 = 165</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 4 = 220</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 5 = 275</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 6 = 330</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 7 = 385</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 8 = 440</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 9 = 495</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 \times 10 = 550</td>
<td></td>
</tr>
</tbody>
</table>

see Student Book page 107
1. Draw at least two 2D shapes in each section of these Venn diagrams.

   **a. Regular shapes**
   - Has a right angle
   - Quadrilaterals

   **Answers may vary.**
   - Example only
   - Pupils should draw any quadrilaterals without right angles in this portion of the diagram.
   - They should draw right-angled quads in the intersection, and any other right-angled shapes in the remaining portion of the first circle. Remind them that they can draw other regular shapes outside the two circles.

   **b. All shapes**
   - Red shapes
   - Triangles

   **Pupils draw any red shapes but not triangles in this portion.**
   - Red triangles only in the intersection.
   - Other triangles here.
   - Other shapes that are neither red nor triangles.

2. Write the numbers from 1 to 30 in the correct places on this Venn diagram.

   **All numbers**
   - 1, 2, 3, 5, 7, 9
   - Multiple of 4
   - Multiple of 6
   - 10, 11
   - 13, 14
   - 15, 17
   - 19, 21
   - 22, 23
   - 25, 26
   - 4, 8, 16
   - 12, 24
   - 6, 18
   - 20, 28
   - 29

   *see Student Book page 109*
1. Put these numbers in the correct place on the Carroll diagram.

<table>
<thead>
<tr>
<th></th>
<th>Multiples of 5</th>
<th>Not multiples of 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Not even</td>
<td>25</td>
<td>1 7 9 21 48 73 101</td>
</tr>
</tbody>
</table>

2. Put the letters of the shapes into the correct places on the Carroll diagram.

<table>
<thead>
<tr>
<th></th>
<th>Has four vertices</th>
<th>Does not have four vertices</th>
</tr>
</thead>
<tbody>
<tr>
<td>No line of symmetry</td>
<td>B, D, F</td>
<td></td>
</tr>
<tr>
<td>Has line of symmetry</td>
<td>G, I,</td>
<td>A, C, E, H</td>
</tr>
</tbody>
</table>

see Student Book page 111
Decide how to work these problems out. You can calculate in your head or use a pencil and paper or counters to help you.

1. 8 bottles fit into a crate.
   How many crates can I fill with:
   
   a. 48 bottles? 6
   b. 55 bottles? 6
   c. 60 bottles? 7
   d. 84 bottles? 10
   e. 100 bottles? 12

2. 5 people fit into a car.
   How many cars do we need to transport:
   
   a. 34 people? 7
   b. 45 people? 9
   c. 69 people? 14
   d. 85 people? 17
   e. 93 people? 19

3. What happened to the remainders in question 2?
   Explain your answers.

   You have to round up to the next whole multiple, as the remaining people could still need another car, even if they do not fill it.

see Student Book page 119
1. How many counters would each student get if these counters were shared equally among:
   a. 6 students
   b. 4 students
   c. 3 students
   d. 8 students
   e. 5 students
   f. 7 students

2. Complete these division facts as quickly as you can.
   a. $15 \div 3 = \underline{5}$
   b. $18 \div 3 = \underline{6}$
   c. $18 \div 6 = \underline{3}$
   d. $16 \div 4 = \underline{4}$
   e. $21 \div 3 = \underline{7}$
   f. $32 \div 8 = \underline{4}$
   g. $40 \div 8 = \underline{5}$
   h. $45 \div 9 = \underline{5}$
   i. $80 \div 8 = \underline{10}$
   j. $90 \div 9 = \underline{10}$
   k. $50 \div 10 = \underline{5}$
   l. $15 \div 5 = \underline{3}$
   m. $25 \div 5 = \underline{5}$
   n. $20 \div 10 = \underline{2}$
   o. $36 \div 6 = \underline{6}$
   p. $24 \div 8 = \underline{3}$
   q. $27 \div 9 = \underline{3}$
   r. $49 \div 7 = \underline{7}$
   s. $100 \div 10 = \underline{10}$
   t. $42 \div 6 = \underline{7}$
   u. $81 \div 9 = \underline{9}$
   v. $64 \div 8 = \underline{8}$
   w. $48 \div 8 = \underline{6}$
   x. $54 \div 6 = \underline{9}$
1 Fill in the missing numbers in each number machine.

\[ \begin{array}{c}
70 & \rightarrow 7 \\
210 & \rightarrow 21 \\
350 & \rightarrow 35 \\
400 & \rightarrow 40 \\
480 & \rightarrow 48 \\
\end{array} \]

\[ \begin{array}{c}
70 & \rightarrow 7 \\
800 & \rightarrow 80 \\
190 & \rightarrow 19 \\
230 & \rightarrow 23 \\
450 & \rightarrow 45 \\
\end{array} \]

\[ \begin{array}{c}
400 & \rightarrow 4 \\
1600 & \rightarrow 16 \\
1800 & \rightarrow 18 \\
3200 & \rightarrow 32 \\
900 & \rightarrow 9 \\
\end{array} \]

2 Mike has a model car. It is 10 times smaller than a real car. If the model is 42 cm long, how long is the real car?

\[ 420 \text{ cm or } 4.2 \text{ m} \]

3 A picture of a ruler is \( \frac{1}{10} \) of the size of a real ruler. If the real ruler is 30 cm long, how big is the ruler in the picture?

\[ 3 \text{ cm long} \]
Divide or multiply?

1. Fill in the missing operation sign (× or ÷) to make each number sentence correct.

   a. 40 ÷ 5 = 8
   b. 6 × 8 = 48
   c. 6 ÷ 6 = 1
   d. 6 × 6 = 36
   e. 100 ÷ 10 = 10
   f. 10 × 10 = 100
   g. 9 × 9 = 81
   h. 81 ÷ 9 = 9
   i. 300 ÷ 10 = 30
   j. 5 × 6 = 30
   k. 7 × 8 = 56
   l. 200 ÷ 10 = 20

2. Can you solve these number riddles? Draw lines to match the riddles to the correct numbers.

   When I am multiplied by 3 I make 18
   If I am 5 times larger I make 45
   When I am divided into 3 equal groups I make 7
   When I am doubled I make 36
   If you divide me by 10 you get 3
   If you divide me by 9 you get 9

3. Make up your own riddles for the numbers that are left over.

   own work

see Student Book page 123
1. Use the empty grid to redraw this shape so that all sides are $\frac{1}{2}$ of the length they are on the original.

2. Use the empty grid to redraw this shape so that all sides are three times as long as they are on the original.