<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
<th>Task done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beyond 999</td>
<td>4</td>
<td>✔</td>
</tr>
<tr>
<td>What is it worth?</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Rounding to 10 or 100</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Rounding to 1000s</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Using inverse operations</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Order of operations</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Missing operation signs</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Working in order</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Are they the same?</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Finish the shapes</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Symmetry in polygons</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>More symmetry</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Symmetry patterns</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Spinning logos</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>National flags</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Classifying triangles</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Showing time on different clocks</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Holiday activities</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Units of time</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Making decimals</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Locating decimals on a number line</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Units of length</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Measure in different units</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Measuring scales</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Comparing scales</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Counting in steps</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Adding and subtracting by counting in groups</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Position on a grid</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Multiplication facts</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Division facts</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Factors</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Divisibility rules</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Different scales</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Show choices on a pictogram</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Positive and negative numbers</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Temperature changes</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Looking at parallel lines</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Parallel and perpendicular lines in real life</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Task done</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Angles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Angles on a straight line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Equivalent fractions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>More equivalent fractions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Improper fractions and mixed numbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Name the fraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Perimeter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>More perimeter and area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Multiplying by 10 and 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Mutliplying and dividing by 10 and 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Doubling and halving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Reflections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Translated shapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Pairs of decimals that make 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Making 10s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Decimal puzzles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Frequency tables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Bar line graphs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>More line graphs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Mental division strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>More division</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>The sawmill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>What will you do with the remainder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Shapes and nets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Birdwatching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Colour the correct proportions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Recipes and proportions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Bubble percentages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Problems involving percentages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Percentages, decimals and fractions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Equivalent fraction wheels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Ordering equivalent fractions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Likely and unlikely events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Choose your method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Find the area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Multiplying decimals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Work out the mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Mixed calculations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Complete the chart. Draw dots to represent the number for each place value. The first one has been done for you.

<table>
<thead>
<tr>
<th>Number</th>
<th>Ten thousand 10 000s</th>
<th>Thousands 1000s</th>
<th>Hundreds 100s</th>
<th>Tens 10s</th>
<th>Units 1s</th>
</tr>
</thead>
<tbody>
<tr>
<td>12350</td>
<td>⋅</td>
<td>⋅</td>
<td>⋅⋅</td>
<td>⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
</tr>
<tr>
<td>58016</td>
<td>⋅⋅⋅⋅</td>
<td>⋅⋅⋅</td>
<td></td>
<td>⋅</td>
<td>⋅⋅⋅⋅⋅</td>
</tr>
<tr>
<td>22483</td>
<td>⋅⋅</td>
<td>⋅⋅</td>
<td>⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
</tr>
<tr>
<td>18095</td>
<td>⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅</td>
<td>⋅⋅⋅</td>
<td></td>
</tr>
<tr>
<td>73812</td>
<td>⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82743</td>
<td>⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>69741</td>
<td>⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅</td>
<td></td>
<td>⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12694</td>
<td>⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>93621</td>
<td>⋅⋅⋅⋅⋅⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21762</td>
<td>⋅⋅</td>
<td>⋅⋅⋅⋅⋅</td>
<td>⋅⋅⋅⋅</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Calculate in your head:

- a. 43 188 + 100 = 43 288
- b. 43 188 + 1000 = 44 188
- c. 43 188 + 10 000 = 53 188
- d. 43 188 – 100 = 43 088
- e. 43 188 – 1000 = 42 188
- f. 43 188 – 10 000 = 33 188
- g. 34 347 + 200 = 34 547
- h. 34 347 + 2000 = 36 547
- i. 34 347 + 20 000 = 54 347
- j. 34 347 – 200 = 34 147
- k. 34 347 – 2000 = 32 347
- l. 34 347 – 20 000 = 14 347
- m. 20 000 + 100 = 20 100
- n. 30 000 + 1000 = 31 000
- o. 50 000 + 10 000 = 60 000
- p. 20 000 – 100 = 19 900
- q. 30 000 – 1000 = 29 000
- r. 50 000 – 10 000 = 40 000

see Student Book page 6
What is it worth?

125 609

The digit 5 is worth five thousand because of its position in the number.

<table>
<thead>
<tr>
<th>H.Th</th>
<th>T.Th</th>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

Write in words what each underlined digit is worth.

1. 125 609
   ________________
   six hundred

2. 125 609
   ________________
   nine units

3. 58 463
   ________________
   six tens

4. 58 463
   ________________
   four hundred

5. 58 463
   ________________
   fifty thousand

6. 752 186
   ________________
   fifty thousand

7. 752 186
   ________________
   eight tens

8. 752 186
   ________________
   seven hundred thousand

9. 837 612
   ________________
   thirty thousand

10. 627 141
    ________________
    six hundred thousand

11. 766 431
    ________________
    four hundred

12. 179 487
    ________________
    one hundred thousand

see Student Book page 6
1. Circle the numbers that round to 250 when they are rounded to the nearest ten.

- 253
- 245

2. Circle the numbers that round to 1500 to the nearest 100.

- 1569
- 1575
- 1439

3. Round each number to the nearest 10 and to the nearest 100.

<table>
<thead>
<tr>
<th>Number</th>
<th>To the nearest 10</th>
<th>To the nearest 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>369</td>
<td>370</td>
<td>400</td>
</tr>
<tr>
<td>481</td>
<td>480</td>
<td>500</td>
</tr>
<tr>
<td>1402</td>
<td>1400</td>
<td>1400</td>
</tr>
<tr>
<td>8492</td>
<td>8490</td>
<td>8500</td>
</tr>
<tr>
<td>6445</td>
<td>6450</td>
<td>6400</td>
</tr>
<tr>
<td>2569</td>
<td>2570</td>
<td>2600</td>
</tr>
<tr>
<td>1385</td>
<td>1390</td>
<td>1400</td>
</tr>
<tr>
<td>8884</td>
<td>8880</td>
<td>8900</td>
</tr>
<tr>
<td>5495</td>
<td>5500</td>
<td>5500</td>
</tr>
<tr>
<td>7783</td>
<td>7780</td>
<td>7800</td>
</tr>
</tbody>
</table>

4. A newspaper reported that 1300 people attended a cricket match.
   a. If this number was rounded to the nearest 10, what is the smallest and greatest number of people who could have attended? 1295/1299
   b. If this number was rounded to the nearest 100, what is the smallest and greatest number of people who could have attended? 1250/1349
   c. Tell your partner how you worked out your answers. Discussion
Rounding to 1000s

Round each number to its nearest thousand.

Join it to its nearest thousand with a line.

The first one has been done for you.
Using inverse operations

For each number sentence, check whether it is true or false. Write the inverse number operation to check. Then write true or false. The first one has been done for you.

You can use a calculator to help you.

1. \[ 98 \div 4 = 21 \]
   \[ 21 \times 4 = 98 \]
   false

2. \[ 178 + 344 = 522 \]
   \[ 522 - 344 = 178 \]
   true

3. \[ 4750 - 1086 = 3664 \]
   \[ 3664 + 1086 = 4750 \]
   true

4. \[ 5936 \div 8 = 742 \]
   \[ 742 \times 8 = 5936 \]
   true

5. \[ 325 \div 13 = 25 \]
   \[ 25 \times 13 = 325 \]
   true

6. \[ 778 \div 254 = 7 \]
   \[ 7 \times 254 = 778 \]
   false

7. \[ 1344 \div 6 = 228 \]
   \[ 228 \times 6 = 1344 \]
   false

8. \[ 184 \times 9 = 1656 \]
   \[ 1656 \div 9 = 184 \]
   true

see Student Book page 12
# Order of operations

1. For each calculation:
   - circle the part you would do first
   - underline the bit you would do second
   - work out the answers.

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>a ((10 - 2) - 3)</td>
<td>5</td>
</tr>
<tr>
<td>b (8 + 5 - 3)</td>
<td>10</td>
</tr>
<tr>
<td>c ((12 - 9) \times 24 - 6)</td>
<td>66</td>
</tr>
<tr>
<td>d (144 - 21 \times 2)</td>
<td>102</td>
</tr>
<tr>
<td>e (10 + 7 - 2 \times 6)</td>
<td>5</td>
</tr>
<tr>
<td>f (36 \div 6 - 2)</td>
<td>4</td>
</tr>
<tr>
<td>g (5 - 10 \div 2)</td>
<td>0</td>
</tr>
<tr>
<td>h (15 \div 3 - (3 + 2))</td>
<td>0</td>
</tr>
<tr>
<td>i (3 \times 4 - 2 \times 6)</td>
<td>0</td>
</tr>
<tr>
<td>j (7 - 24 \div 6)</td>
<td>3</td>
</tr>
<tr>
<td>k (6 \times 3 - 17)</td>
<td>1</td>
</tr>
<tr>
<td>l (3 \times 3 - 3)</td>
<td>6</td>
</tr>
<tr>
<td>m (4 \times 2 - 16 \div 2)</td>
<td>0</td>
</tr>
<tr>
<td>n (2 + 2 + 2 \times 2)</td>
<td>8</td>
</tr>
<tr>
<td>o (3 \times 9 - 5 \times 5)</td>
<td>2</td>
</tr>
<tr>
<td>p ((8 + 3) \times (20 \div 2) \div 11)</td>
<td>10</td>
</tr>
<tr>
<td>q (2 \times (6 - 3) + 5)</td>
<td>11</td>
</tr>
<tr>
<td>r ((12 + 6) \div (5 - 2))</td>
<td>6</td>
</tr>
<tr>
<td>s ((99 + 22) \div 11)</td>
<td>11</td>
</tr>
<tr>
<td>t (8 \div (16 - 14) - 1)</td>
<td>3</td>
</tr>
</tbody>
</table>

2. Make up six calculations of your own. Make sure there are at least three steps in each one.

- a Own work
- b Own work
- c Own work

- d Own work
- e Own work
- f Own work

3. Swap with a partner. Work out the answers to your partner’s calculations. Own work

see Student Book page 13
1 Put in the operation signs (+, –, ÷, ×) to make these number sentences true. You may also need to use brackets.

a 2 + 3 − 4 = 1       b 2 × 3 − 4 = 2

c 2 − 3 + 4 = 3       d 2 × 3 + 4 = 10

e 8 × 3 − 2 = 22      f 8 × (3 + 2) = 40

g 8 × 3 − 2 = 12      h 8 − (3 × 2) = 2

i 8 − 3 × 2 = 10      j 8 + 3 − 2 = 9

2 Put in the brackets to make these statements true.

a 5 × (7 − 3) = 20
b 28 − (13 − 6) = 21
c (6 − 5) × 12 = 12
d (38 − 23) + (17 − 12) = 10
e 48 ÷ (12 + 6 × 6) = 1
f (23 − 18 − 5) × 7 = 0
g (5 × 6) ÷ (13 − 10) = 10

h 8 × (7 − 2) = 40

3 Use <, > or = to make true statements.

a (8 + 7) × 5 ___ > ___ 8 + 7 × 5
b 7 + 2 × 4 ___ < ___ 5 × 2 + 6
c 5 × 9 ÷ 3 ___ < ___ 8 + 4 × 8
d 23 − 12 ÷ 6 ___ > ___ 2 + 6 × 3
e 5 × 5 ÷ 5 ___ = ___ 5 ÷ 5 × 5
f 36 ÷ 12 ÷ 3 ___ = ___ 24 ÷ 12 ÷ 2

Remember:
> means ‘greater than’
< means ‘less than’
= means ‘equal to’
Working in order

1. The answers to these calculations are correct, but the brackets have been left out of the problems. Add brackets to make each number sentence true. Some number sentences might not need brackets.

   a. \(9 \times (2 + 3) = 45\)
   b. \((16 - 7) \times 3 = 27\)
   c. \(20 \div (4 + 1) = 4\)
   d. \((20 \div 4) + 1 = 6\)
   e. \((18 + 9) \div 3 = 9\)
   f. \((64 \div 8) - 6 = 2\)
   g. \((6 + 6) \times 3 = 36\)
   h. \((10 - 4) \times 5 = 30\)
   i. \(5 + 2 \times (3 + 7) = 25\)
   j. \(12 + 6 \div (7 - 4) = 14\)
   k. \((7 + 10 - 5) \div 2 = 6\)
   l. \((6 - 3) \times 2 = 6\)
   m. \(10 \times (6 + 4) = 100\)
   n. \(27 - (14 - 8) = 21\)

2. Write whether each statement is true or false.

   a. \((100 + 10) + 2 = 100 + (10 + 2)\) \hspace{1cm} true
   b. \((100 \times 10) \times 2 = 100 \times (10 \times 2)\) \hspace{1cm} true
   c. \((100 - 10) - 2 = 100 - (10 - 2)\) \hspace{1cm} false
   d. \((100 \div 10) \div 2 = 100 \div (10 \div 2)\) \hspace{1cm} false
   e. \(80 - 5 - 5 - 5 - 5 - 5 = 80 - (5 + 5 + 5 + 5 + 5 + 5)\) \hspace{1cm} true
   f. \(64 \div 2 \div 2 \div 2 \div 2 \div 2 = 64 \div (2 \times 2 \times 2 \times 2 \times 2)\) \hspace{1cm} true

3. Draw a flow diagram (on a separate piece of paper) to teach someone how to work in the correct order in maths. 

   Own work

see Student Book page 14
1. Here are some pairs of expressions.

Write whether each pair gives the same or a different result.

a. \(2 + 3 \times 4\) and \(3 \times 4 + 2\)  
   \[\text{same}\]

b. \(2 \times 12 \div 3\) and \(12 \div 3 \times 2\)  
   \[\text{same}\]

c. \(50 - 25 - 5\) and \(25 - 5 - 50\)  
   \[\text{different}\]

d. \(25 \times 4 - 8\) and \(8 - 25 \times 4\)  
   \[\text{same}\]

e. \(25 \times 4 \div 5\) and \(5 \div 25 \times 4\)  
   \[\text{different}\]

2. Fill in the operations and brackets to make true statements.

a. \((7 + 3) \times 5 - 4 = 46\)

b. \(7 \times 3 + 5 - 4 = 22\)

c. \((7 - 3) \times 5 + 4 = 24\)

d. \(7 - 3 \times 5 \times 4 = 80\)

e. \((7 + 3) \times 5 \times 4 = 200\)

3. Choose four digits of your own. Use brackets and operations as in question 2. Use the space below to make as many different numbers as you can. Choose one of the numbers you have made. Can you make it in more than one way using the same four digits?

Own work
Finish the shapes

These shapes are only half-drawn. Use the spots to complete the shapes. Write what shape you have drawn on the line under each shape.

---

1. \[\square\]
2. \[\triangle\]
3. \[\square\]
4. \[\cup\]
5. \[\bowtie\]
6. \[\Upsilon\]
7. \[\nabla\]
8. \[\Upsilon\]

---

see Student Book page 16
Symmetry in polygons

Write the name of each polygon.
Draw at least one line of symmetry on each.

1. Triangle

2. Hexagon

3. Decagon

4. Square (accept rhombus as well)

5. Square

6. Pentagon

7. Octagon

8. Heptagon

see Student Book page 17
More symmetry

On these shapes, draw any lines of symmetry in different colours.

You can check with a mirror. If your line of symmetry is correct, you will see the other half of the shape in the mirror.

see Student Book page 17
Symmetry patterns

Complete each pattern so it is symmetrical about both lines of symmetry.  Own work

Draw your own symmetrical patterns using these lines of symmetry.  Own work

see Student Book page 18
Many common shapes and patterns have rotational symmetry.

1. What order of symmetry do these have?
   a.  
   b.  
   c.  
   d.  

2. Design a logo for your class. Decide what order of rotational symmetry it should have. Draw it here.

   Own work
The flag of Jamaica has two lines of symmetry. If it was lifted and rotated about its centre point, it would fit into its own outline in two different positions. So it has rotational symmetry of order 2.

For each flag below, write the number of lines of symmetry and order of rotational symmetry.

1. Australia
   - lines: 0
   - order: 1

2. England
   - lines: 2
   - order: 2

3. France
   - lines: 2
   - order: 2

4. India
   - lines: 2
   - order: 2

5. Botswana
   - lines: 2
   - order: 2

6. Canada
   - lines: 1
   - order: 2

7. Trinidad and Tobago
   - lines: 0
   - order: 2

8. Thailand
   - lines: 2
   - order: 2

9. Switzerland
   - lines: 4
   - order: 4

see Student Book page 19
1 Colour the odd triangle out in each set. You may need to measure the sides and angles to help you decide which one is the odd one out.  

2 Write a sentence saying why the coloured one does not fit with the others in the set.  

Some possible answers are:  

Third triangle is odd one out as it is obtuse-angled (not right-angled)  

Second triangle is odd one out as it is the only one that is equilateral  

Third one is odd one out as it is the only one that is not isosceles  

Second one is the odd one out as it is the only one that is acute angled  

see Student Book page 22
Showing time on different clocks

Complete the chart to give the times in words, as a.m. and p.m., and in 24-hour notation. Remember that 24-hour time always uses four digits.

The first three have been done for you.

<table>
<thead>
<tr>
<th>In words</th>
<th>12-hour notation</th>
<th>24-hour notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>half past eight in the morning</td>
<td>8:30</td>
<td>08:30</td>
</tr>
<tr>
<td>three o’clock in the afternoon</td>
<td>3:00</td>
<td>15:00</td>
</tr>
<tr>
<td>quarter to eight at night</td>
<td>7:45</td>
<td>19:45</td>
</tr>
<tr>
<td>seven o’clock in the morning</td>
<td>7:00</td>
<td>19:00</td>
</tr>
<tr>
<td>half past ten at night</td>
<td>10:30</td>
<td>22:30</td>
</tr>
<tr>
<td>quarter past four in the afternoon</td>
<td>16:15</td>
<td>16:15</td>
</tr>
<tr>
<td>quarter to one in the afternoon</td>
<td>12:45</td>
<td>12:45</td>
</tr>
<tr>
<td>twenty-five to five in the afternoon</td>
<td>16:35</td>
<td>16:35</td>
</tr>
<tr>
<td>five to eleven at night</td>
<td>22:55</td>
<td>22:55</td>
</tr>
</tbody>
</table>

see Student Book page 23
Holiday activities

On a holiday camp, there is a very full programme of activities to choose from. These are the activities on offer in the morning:

<table>
<thead>
<tr>
<th>Start time</th>
<th>Activity</th>
<th>Length of time in hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.00 a.m.</td>
<td>Hiking</td>
<td>3</td>
</tr>
<tr>
<td>6.35 a.m.</td>
<td>Surfing</td>
<td>2</td>
</tr>
<tr>
<td>8.30 a.m.</td>
<td>Riding</td>
<td>1½</td>
</tr>
<tr>
<td>8.45 a.m.</td>
<td>Target shooting</td>
<td>1</td>
</tr>
<tr>
<td>9.30 a.m.</td>
<td>Painting</td>
<td>2½</td>
</tr>
<tr>
<td>10 a.m.</td>
<td>Judo</td>
<td>1½</td>
</tr>
<tr>
<td>10 a.m.</td>
<td>Archery</td>
<td>1½</td>
</tr>
<tr>
<td>12 noon</td>
<td>Lunch</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Choose five different activities from the list. Write the start and finish time for each one. Use 24-hour time.

- Hiking 06:00 - 09:00
- Judo 10:00 - 11:30
- Surfing 06:35 - 08:35
- Archery 10:00 - 11:30
- Riding 08:30 - 10:00
- Target shooting 08:45 - 09:45
- Painting 09:30 - 12:00

2. Write down how many of the five on your list you would be able to do in one day. Explain how you worked out your answer.

Three activities maximum:

- Surfing 06:35 - 08:35
- Target shooting 08:45 - 09:45
- Judo 10:00 - 11:30 OR Archery 10:00 - 11:30

see Student Book page 23
Units of time

1. There are seven units of time hidden in this word search.
   a. Find the units of time.
   b. Write them in order from the shortest to the longest.

<table>
<thead>
<tr>
<th>H</th>
<th>O</th>
<th>U</th>
<th>R</th>
<th>Q</th>
<th>Y</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>E</td>
<td>L</td>
<td>W</td>
<td>E</td>
<td>E</td>
<td>K</td>
</tr>
<tr>
<td>B</td>
<td>P</td>
<td>F</td>
<td>X</td>
<td>D</td>
<td>A</td>
<td>Y</td>
</tr>
<tr>
<td>A</td>
<td>J</td>
<td>Y</td>
<td>H</td>
<td>C</td>
<td>R</td>
<td>N</td>
</tr>
<tr>
<td>M</td>
<td>I</td>
<td>N</td>
<td>U</td>
<td>T</td>
<td>E</td>
<td>G</td>
</tr>
<tr>
<td>M</td>
<td>O</td>
<td>N</td>
<td>T</td>
<td>H</td>
<td>R</td>
<td>W</td>
</tr>
<tr>
<td>T</td>
<td>S</td>
<td>E</td>
<td>C</td>
<td>O</td>
<td>N</td>
<td>D</td>
</tr>
</tbody>
</table>

2. Complete.
   a. There are __ days in 1 week.
   b. 8 weeks = __ days
   c. 35 weeks = __ days
   d. There are __ weeks in a year
   e. 84 days = __ weeks
   f. 91 days = __ weeks
   g. 175 days = __ weeks
   h. 16 weeks is about __ months
   i. 8 months is about __ weeks
   j. 1 year = __ months
   k. 5 years = __ months
   l. 20 years = __ months
   m. 36 months = __ years
   n. 84 months = __ years
   o. 66 months = __ years

3. How many days in?
   a. 1 week 6 days __
   b. 3 weeks __
   c. this year plus next year _730 (_731 if one of the years is a leap year)
   d. the first six months of the year _181 (count the actual days per month)
   e. the last six months of the year _184

   see Student Book page 28
Making decimals

Shade each shape to show the decimal fraction.

Write a decimal to show what fraction of the shape is unshaded.

Various shading options are possible. Allow the students to check each other’s work.

Shaded 0.4
Unshaded 0.6

Shaded 0.43
Unshaded 0.57

Shaded 0.9
Unshaded 0.1

Shaded 0.5
Unshaded 0.5

Shaded 0.05
Unshaded 0.95

Shaded 0.55
Unshaded 0.45

Shaded 0.27
Unshaded 0.73

Shaded 0.72
Unshaded 0.28

Shaded 0.07
Unshaded 0.93

Shaded 0.9
Unshaded 0.1

Shaded 0.09
Unshaded 0.91

Shaded 0.99
Unshaded 0.01

see Student Book page 29
Locating decimals on a number line

Mark and label each set of decimals on the given number lines.

1. 0.1 0.2 0.5 0.7 0.8 1.1
2. 0.1 1.0 1.5 2.3 4.4 5.8
3. 0.03 0.09 0.33 0.55 0.75 0.99

Fill in < or > between each pair of decimals. Use your number lines to help you decide.

- a 0.3 < 1
- b 0.05 < 0.5
- c 2.5 < 2.9
- d 0.7 > 0.69
- e 0.09 > 0.1
- f 0.33 > 0.3

see Student Book page 30
Units of length

Complete the tables by filling in the equivalent measurements.

<table>
<thead>
<tr>
<th>Kilometres</th>
<th>Metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1000</td>
</tr>
<tr>
<td>5</td>
<td>5000</td>
</tr>
<tr>
<td>7.5</td>
<td>7500</td>
</tr>
<tr>
<td>12</td>
<td>12 000</td>
</tr>
<tr>
<td>135</td>
<td>135 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metres</th>
<th>Centimetres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>900</td>
</tr>
<tr>
<td>28</td>
<td>2800</td>
</tr>
<tr>
<td>98</td>
<td>9800</td>
</tr>
<tr>
<td>150</td>
<td>15 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Centimetres</th>
<th>Millimetres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>67</td>
<td>670</td>
</tr>
<tr>
<td>189</td>
<td>1890</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metres</th>
<th>Millimetres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1000</td>
</tr>
<tr>
<td>8</td>
<td>8000</td>
</tr>
<tr>
<td>15</td>
<td>15 000</td>
</tr>
<tr>
<td>27</td>
<td>27 000</td>
</tr>
<tr>
<td>112</td>
<td>112 000</td>
</tr>
</tbody>
</table>
Measure in different units

Measure each item and write the measurement in two different ways.

<table>
<thead>
<tr>
<th>Item</th>
<th>In millimetres</th>
<th>In centimetres</th>
</tr>
</thead>
<tbody>
<tr>
<td>the length of my thumbnail</td>
<td>Own work</td>
<td></td>
</tr>
<tr>
<td>span of my left hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>length of my shoe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>length of a pair of scissors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>length of a pencil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>width of this book</td>
<td></td>
<td></td>
</tr>
<tr>
<td>height of a coffee mug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>length of a stapler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>width across a pair of spectacles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>length of a belt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Measuring scales

1. The arrows represent measurements on each scale. Estimate what each measurement is. 
   Possible estimates are:

   - Scale 1:
     - 0 to 15 g
     - 15 g to 30 g
     - 30 g to 45 g
     - 45 g to 60 g
     - 60 g to 75 g
     - 75 g to 90 g
     - 90 g to 105 g

   - Scale 2:
     - 0 to 1 km
     - 1 km to 2 km
     - 2 km to 3 km
     - 3 km to 4 km

   - Scale 3:
     - 0 to 500 ml
     - 500 ml to 1 l
     - 1 l to 1.5 l
     - 1.5 l to 2 l

   - Scale 4:
     - 0 to 1 kg
     - 1 kg to 2 kg
     - 2 kg to 3 kg
     - 3 kg to 4 kg

2. Draw more liquid in each jug to show the given measurements.

   - Half litre
   - 450 ml
   - 1.4 litres

3. Draw arrows on each scale to show the given measurements.
Comparing scales

Draw arrows to show where the given amount would show on each scale

450g

1.2l

3.4m

2.4kg

45ml

32°C

-5°C

see Student Book page 38
Counting in steps

Count on or back in the given steps to complete each set of numbers.

When you have finished, use a calculator to check your answers.

<table>
<thead>
<tr>
<th>Count on in 12s</th>
<th>56</th>
<th>68</th>
<th>80</th>
<th>92</th>
<th>104</th>
<th>116</th>
<th>128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count back in 12s</td>
<td>36</td>
<td>24</td>
<td>12</td>
<td>0</td>
<td>-12</td>
<td>-24</td>
<td>-36</td>
</tr>
<tr>
<td>Count on in 11s</td>
<td>20</td>
<td>31</td>
<td>42</td>
<td>53</td>
<td>64</td>
<td>75</td>
<td>86</td>
</tr>
<tr>
<td>Count back in 11s</td>
<td>88</td>
<td>77</td>
<td>66</td>
<td>55</td>
<td>44</td>
<td>33</td>
<td>22</td>
</tr>
<tr>
<td>Count back in 11s</td>
<td>86</td>
<td>75</td>
<td>64</td>
<td>53</td>
<td>42</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>Count on in 15s</td>
<td>205</td>
<td>220</td>
<td>235</td>
<td>250</td>
<td>265</td>
<td>280</td>
<td>295</td>
</tr>
<tr>
<td>Count back in 15s</td>
<td>60</td>
<td>45</td>
<td>30</td>
<td>15</td>
<td>0</td>
<td>-15</td>
<td>-30</td>
</tr>
</tbody>
</table>

Pete counts in fives from 132 to 500. Try to answer these questions without actually counting.

Would he count 182?  
Would he count 387?  
Would he count 198?

Explain how you answered these questions.
Adding and subtracting by counting in groups

Fill in the missing numbers on each number line.

Write the answers to each calculation.

247 + 318 = □ 565

762 + 189 = □ 951

3109 + 1098 = □ 4207

94 – 77 = □ 67

708 – 518 = □ 190

1034 – 587 = □ 447

142 + 612 = □ 754

876 + 1245 = □ 2121

1124 + 7122 = □ 8246

184 – 92 = □ 92

746 – 349 = □ 397

9000 – 7848 = □ 1152

see Student Book page 43
Plot and label each set of points.

Draw lines to join them up (in order).

Write the name of each shape.

1. A(1, 10), B(4, 7), C(1, 7)  ________________ triangle
2. D(12, 10), E(14, 10), F(14, 3) G(12, 3)  ________________ rectangle
3. H(8, 10), I(11, 7), J(8, 4), K(5, 7)  ________________ square
4. L(2, 1), M(6, 1), N(6, 3) O(4, 5), P(2, 3)  ________________ pentagon
5. Q(9, 3), R(9, 0), S(13, 0)  ________________ triangle
Multiplication facts

Use these tests to check how well you know your multiplication facts.

Write the answers only.

Time how long it takes you to complete each test.

<table>
<thead>
<tr>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4 \times 5 = 20$</td>
<td>$2 \times 10 = 20$</td>
<td>$2 \times 10 = 20$</td>
</tr>
<tr>
<td>$3 \times 8 = 24$</td>
<td>$1 \times 8 = 8$</td>
<td>$9 \times 9 = 81$</td>
</tr>
<tr>
<td>$9 \times 2 = 18$</td>
<td>$4 \times 4 = 16$</td>
<td>$9 \times 8 = 72$</td>
</tr>
<tr>
<td>$1 \times 9 = 9$</td>
<td>$3 \times 6 = 18$</td>
<td>$10 \times 9 = 90$</td>
</tr>
<tr>
<td>$4 \times 6 = 24$</td>
<td>$7 \times 10 = 70$</td>
<td>$4 \times 3 = 12$</td>
</tr>
<tr>
<td>$3 \times 7 = 21$</td>
<td>$3 \times 9 = 27$</td>
<td>$5 \times 9 = 45$</td>
</tr>
<tr>
<td>$2 \times 7 = 14$</td>
<td>$8 \times 9 = 72$</td>
<td>$8 \times 6 = 48$</td>
</tr>
<tr>
<td>$5 \times 5 = 25$</td>
<td>$5 \times 3 = 15$</td>
<td>$5 \times 8 = 40$</td>
</tr>
<tr>
<td>$2 \times 8 = 16$</td>
<td>$9 \times 4 = 36$</td>
<td>$9 \times 3 = 27$</td>
</tr>
<tr>
<td>$9 \times 3 = 27$</td>
<td>$7 \times 5 = 35$</td>
<td>$6 \times 7 = 42$</td>
</tr>
<tr>
<td>$6 \times 5 = 30$</td>
<td>$10 \times 9 = 90$</td>
<td>$5 \times 4 = 20$</td>
</tr>
<tr>
<td>$10 \times 7 = 70$</td>
<td>$8 \times 8 = 64$</td>
<td>$1 \times 9 = 9$</td>
</tr>
<tr>
<td>$7 \times 6 = 42$</td>
<td>$7 \times 7 = 49$</td>
<td>$8 \times 4 = 32$</td>
</tr>
<tr>
<td>$3 \times 9 = 27$</td>
<td>$9 \times 9 = 81$</td>
<td>$6 \times 9 = 54$</td>
</tr>
<tr>
<td>$5 \times 8 = 40$</td>
<td>$6 \times 8 = 48$</td>
<td>$6 \times 7 = 42$</td>
</tr>
<tr>
<td>$4 \times 9 = 36$</td>
<td>$10 \times 6 = 60$</td>
<td>$7 \times 8 = 56$</td>
</tr>
<tr>
<td>$6 \times 6 = 36$</td>
<td>$7 \times 9 = 63$</td>
<td>$4 \times 9 = 36$</td>
</tr>
<tr>
<td>$5 \times 10 = 50$</td>
<td>$9 \times 6 = 54$</td>
<td>$6 \times 5 = 30$</td>
</tr>
<tr>
<td>$6 \times 9 = 54$</td>
<td>$8 \times 5 = 40$</td>
<td>$6 \times 10 = 60$</td>
</tr>
<tr>
<td>$2 \times 3 = 6$</td>
<td>$9 \times 7 = 63$</td>
<td>$4 \times 9 = 36$</td>
</tr>
</tbody>
</table>

Time: Time: Time:

see Student Book pages 49 and 50
Division facts

Use these tests to check how well you know your division facts.

Write the answers only.

Time how long it takes you to complete each test.

<table>
<thead>
<tr>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 ÷ 2 = 8</td>
<td>21 ÷ 3 = 7</td>
<td>12 ÷ 4 = 3</td>
</tr>
<tr>
<td>30 ÷ 3 = 10</td>
<td>36 ÷ 4 = 9</td>
<td>32 ÷ 8 = 4</td>
</tr>
<tr>
<td>24 ÷ 8 = 3</td>
<td>90 ÷ 9 = 10</td>
<td>27 ÷ 9 = 3</td>
</tr>
<tr>
<td>27 ÷ 3 = 9</td>
<td>24 ÷ 4 = 6</td>
<td>80 ÷ 8 = 10</td>
</tr>
<tr>
<td>45 ÷ 5 = 9</td>
<td>81 ÷ 9 = 9</td>
<td>64 ÷ 8 = 8</td>
</tr>
<tr>
<td>81 ÷ 9 = 9</td>
<td>25 ÷ 5 = 5</td>
<td>48 ÷ 8 = 6</td>
</tr>
<tr>
<td>25 ÷ 5 = 5</td>
<td>15 ÷ 3 = 5</td>
<td>45 ÷ 5 = 9</td>
</tr>
<tr>
<td>24 ÷ 4 = 6</td>
<td>64 ÷ 8 = 8</td>
<td>56 ÷ 8 = 7</td>
</tr>
<tr>
<td>48 ÷ 6 = 8</td>
<td>18 ÷ 6 = 3</td>
<td>12 ÷ 2 = 6</td>
</tr>
<tr>
<td>50 ÷ 5 = 10</td>
<td>42 ÷ 6 = 7</td>
<td>28 ÷ 2 = 14</td>
</tr>
<tr>
<td>72 ÷ 9 = 8</td>
<td>63 ÷ 7 = 9</td>
<td>72 ÷ 8 = 9</td>
</tr>
<tr>
<td>48 ÷ 8 = 6</td>
<td>20 ÷ 4 = 5</td>
<td>35 ÷ 5 = 7</td>
</tr>
<tr>
<td>30 ÷ 6 = 5</td>
<td>49 ÷ 7 = 7</td>
<td>8 ÷ 1 = 8</td>
</tr>
<tr>
<td>35 ÷ 7 = 5</td>
<td>72 ÷ 9 = 8</td>
<td>36 ÷ 6 = 6</td>
</tr>
<tr>
<td>64 ÷ 8 = 8</td>
<td>50 ÷ 5 = 10</td>
<td>14 ÷ 2 = 7</td>
</tr>
<tr>
<td>63 ÷ 9 = 7</td>
<td>54 ÷ 9 = 6</td>
<td>18 ÷ 9 = 2</td>
</tr>
<tr>
<td>54 ÷ 6 = 8</td>
<td>16 ÷ 2 = 8</td>
<td>48 ÷ 6 = 8</td>
</tr>
<tr>
<td>24 ÷ 8 = 3</td>
<td>28 ÷ 7 = 4</td>
<td>36 ÷ 9 = 4</td>
</tr>
<tr>
<td>90 ÷ 10 = 9</td>
<td>36 ÷ 6 = 6</td>
<td>48 ÷ 6 = 8</td>
</tr>
<tr>
<td>21 ÷ 3 = 7</td>
<td>35 ÷ 7 = 5</td>
<td>54 ÷ 9 = 6</td>
</tr>
</tbody>
</table>

Time: Time: Time:
1. Find the factor pairs for each number. Write them in the towers.

2. Complete these tables.

<table>
<thead>
<tr>
<th>Product</th>
<th>12</th>
<th>18</th>
<th>36</th>
<th>48</th>
<th>30</th>
<th>100</th>
<th>90</th>
<th>81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Factor</td>
<td>12</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Product</td>
<td>8</td>
<td>27</td>
<td>32</td>
<td>45</td>
<td>42</td>
<td>49</td>
<td>64</td>
<td>72</td>
</tr>
</tbody>
</table>
Divisibility rules

1. Write the numbers in the box into the correct columns in the table.

<table>
<thead>
<tr>
<th>Divisible by 2</th>
<th>Not divisible by 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>28, 16, 58, 124, 148, 1120, 900, 2356, 650, 1190, 4512</td>
<td>17, 19, 113, 29, 45, 109, 191, 4509, 5201</td>
</tr>
</tbody>
</table>

2. Circle all the numbers that are divisible by 5.

Colour in the circles if the number is also divisible by 10.

3. Circle all the numbers that are divisible by 100.

4. Are all numbers that are divisible by 100 also divisible by:
   a. 2 yes
   b. 5 yes
   c. 10 yes

Explain how you decided.

see Student Book page 57
Different scales

This table gives the prices per kilogram of bananas at five different stores.

<table>
<thead>
<tr>
<th>Store</th>
<th>Farmers-R-us</th>
<th>Fancy Fruits</th>
<th>Cheap-n-Fresh</th>
<th>Fresh Things</th>
<th>Speciality Fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price per kilogram ($)</td>
<td>2.50</td>
<td>4.00</td>
<td>1.00</td>
<td>2.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

1. Use the data in the table to complete these bar graphs comparing the prices of the different items.

Graph A

Graph B

Graph C

2. Discuss these questions, with a partner.
   a. Do all three graphs show the same information?
   b. What makes the graphs look different?
   c. Which graph do you think gives the most accurate picture of the data? Why?

see Student Book page 59
Show choices on a pictogram

Use this grid to complete question 1.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abseiling</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Canoeing</td>
<td>☐ ☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Wind-surfing</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Pony-trekking</td>
<td>☐ ☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Parachuting</td>
<td>☐ ☐</td>
</tr>
<tr>
<td>Archery</td>
<td>☐ ☐ ☐</td>
</tr>
<tr>
<td>Orienteering</td>
<td>☐ ☐ ☐</td>
</tr>
<tr>
<td>Climbing</td>
<td>☐ ☐ ☐</td>
</tr>
<tr>
<td>Dinghy sailing</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>Water-skiing</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

Use this table to record your data.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abseiling</td>
<td>4</td>
</tr>
<tr>
<td>Canoeing</td>
<td>7</td>
</tr>
<tr>
<td>Wind-surfing</td>
<td>3</td>
</tr>
<tr>
<td>Pony-trekking</td>
<td>5</td>
</tr>
<tr>
<td>Parachuting</td>
<td>6</td>
</tr>
<tr>
<td>Archery</td>
<td>6</td>
</tr>
<tr>
<td>Orienteering</td>
<td>6</td>
</tr>
<tr>
<td>Climbing</td>
<td>3</td>
</tr>
<tr>
<td>Dinghy sailing</td>
<td>4</td>
</tr>
<tr>
<td>Water-skiing</td>
<td>4</td>
</tr>
</tbody>
</table>

Use this grid to draw the pictogram for your class.

<table>
<thead>
<tr>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abseiling</td>
</tr>
<tr>
<td>Canoeing</td>
</tr>
<tr>
<td>Wind-surfing</td>
</tr>
<tr>
<td>Pony-trekking</td>
</tr>
<tr>
<td>Parachuting</td>
</tr>
<tr>
<td>Archery</td>
</tr>
<tr>
<td>Orienteering</td>
</tr>
<tr>
<td>Climbing</td>
</tr>
<tr>
<td>Dinghy sailing</td>
</tr>
<tr>
<td>Water-skiing</td>
</tr>
</tbody>
</table>

Key

♀ = 2 students

own graph

see Student Book pages 60 and 61
Positive and negative numbers

1 Fill in the missing numbers on each number line.

2 Write the number shown by each arrow on the number lines.

3 Estimate and show where you think each number would go on the given number lines.

Student’s own estimates

see Student Book page 64
Colour the thermometers to show the given temperatures.

Write what the temperature would be if it changed as given.

- **15°C**
  - 4 degrees warmer: 19°C
  - 12 degrees colder: 3°C

- **12°C**
  - 9 degrees colder: 3°C
  - Another 3 degrees colder: 0°C

- **19°C**
  - 5 degrees warmer: 24°C
  - 22 degrees colder: -3°C

- **21°C**
  - A rise of 15°C: 36°C
  - A decrease of 18°C: 3°C

- **-4°C**
  - A drop of −6°C: -10°C
  - A rise of 8°C: 4°C

- **-2°C**
  - 9°C colder: -11°C
  - Another 3°C colder: -14°C
Looking at parallel lines

Look at these pictures. Tick the ones that have parallel lines.

1 ✓
2 ✗
3 ✓
4 ✓
5 ✓
6 ✗
7 ✗
8 ✓
9 ✗
10 ✓
11 ✓
12 ✓

see Student Book page 70
1. **On this five-barred gate, colour in:**
   a. one pair of horizontal parallel bars green
   b. one pair of vertical parallel bars red
   c. the diagonal blue.

2. **Write the size of the angles formed between the diagonal bar and the other bars.**
   
   22° and 158°

3. **What do you notice about the angles formed by a line intersecting parallel lines?**
   
   They add up to 180°

4. **Draw your own sets of lines:**
   a. one pair of diagonal parallel lines
   b. one pair of perpendicular lines.

   **Own work**

5. **What can you say about the two angles formed by a pair of perpendicular lines?**

   **Discussion**
1. On the bicycle:
   a. Find five acute angles. Mark them blue.
   b. Find three obtuse angles. Mark them green.
   c. Find four right angles. Mark them red.

2. Write whether each numbered angle in this drawing is acute, obtuse, or a right angle.

   a. obtuse  
   b. acute  
   c. obtuse  
   d. acute  
   e. acute  
   f. acute  
   g. obtuse  
   h. right  
   i. acute  
   j. obtuse

see Student Book page 74
Angles on a straight line

The line AB is a straight line in each diagram.

Use the size of the given angles to calculate the size of the unmarked angle in each diagram.

A

\[90^\circ\]

B

A

\[43^\circ\]

\[137^\circ\]

B

A

\[81^\circ\]

\[109^\circ\]

B

A

\[115^\circ\]

\[109^\circ\]

B

A

\[108^\circ\]

\[72^\circ\]

B

A

\[152^\circ\]

\[28^\circ\]

B

A

\[10^\circ\]

\[170^\circ\]

B

A

\[32^\circ\]

\[108^\circ\]

\[40^\circ\]

B

A

\[30^\circ\]

\[60^\circ\]

B

see Student Book page 75
1. Write the equivalent fractions:
   a. \( \frac{1}{4} = \frac{2}{8} \)
   b. \( \frac{2}{5} = \frac{4}{10} \)
   c. \( \frac{3}{4} = \frac{6}{8} \)
   d. \( \frac{1}{2} = \frac{5}{10} \)
   e. \( \frac{6}{10} = \frac{3}{5} \)
   f. \( \frac{1}{3} = \frac{2}{6} \)

2. Circle the fraction that is not equivalent in each set.
   a. \( \frac{1}{2}, \frac{4}{8}, \frac{5}{10}, \frac{2}{5} \)
   b. \( \frac{1}{3}, \frac{2}{6}, \frac{3}{9}, \frac{3}{10} \)
   c. \( \frac{3}{4}, \frac{6}{8}, \frac{8}{10}, \frac{9}{12} \)

3. Circle the fractions that are less than \( \frac{1}{2} \).

4. Write each set of fractions in order from smallest to greatest.
   a. \( \frac{3}{4}, \frac{1}{4}, \frac{1}{2}, \frac{1}{4}, \frac{1}{2}, \frac{3}{4} \)
   b. \( \frac{1}{2}, \frac{9}{10}, \frac{4}{5}, \frac{3}{10}, \frac{3}{10}, \frac{1}{2}, \frac{1}{5}, \frac{9}{10} \)
   c. \( \frac{1}{2}, \frac{5}{8}, \frac{3}{8}, \frac{3}{4}, \frac{3}{8}, \frac{1}{2}, \frac{5}{8}, \frac{3}{4} \)
   d. \( \frac{2}{5}, \frac{1}{10}, \frac{1}{2}, \frac{3}{5}, \frac{4}{10}, \frac{1}{10}, \frac{2}{5}, \frac{1}{2}, \frac{3}{5} \)
   e. \( \frac{1}{3}, \frac{1}{2}, \frac{1}{5}, \frac{1}{10}, \frac{1}{8}, \frac{1}{10}, \frac{1}{8}, \frac{1}{5}, \frac{1}{3}, \frac{1}{2} \)

5. Tick the statements that are true. Correct any statements that are false.
   a. \( \frac{3}{5} = \frac{6}{10} \)
   b. \( \frac{1}{2} > \frac{3}{4} \)
   c. \( \frac{2}{8} < \frac{1}{4} \)
   d. \( \frac{5}{10} > \frac{3}{8} \)
   e. \( \frac{5}{8} < \frac{1}{2} \)
   f. \( \frac{3}{4} = \frac{6}{8} \)
   g. \( \frac{7}{10} < \frac{6}{8} \)
   h. \( 1 = \frac{10}{10} \)
   i. \( \frac{5}{8} = \frac{3}{4} \)

See Student Book page 77
More equivalent fractions

Remember: Equivalent fractions have the same value.

1. Complete this chart of equivalent fractions.

<table>
<thead>
<tr>
<th>Thirds</th>
<th>Quarters</th>
<th>Fifths</th>
<th>Sixths</th>
<th>Eighths</th>
<th>Tenths</th>
</tr>
</thead>
<tbody>
<tr>
<td>–</td>
<td>2/4</td>
<td>–</td>
<td>3/6</td>
<td>4/8</td>
<td>5/10</td>
</tr>
<tr>
<td>1/3</td>
<td>–</td>
<td>–</td>
<td>2/6</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>2/3</td>
<td>–</td>
<td>–</td>
<td>4/6</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>–</td>
<td>1/4</td>
<td>–</td>
<td>–</td>
<td>2/8</td>
<td>–</td>
</tr>
<tr>
<td>–</td>
<td>3/4</td>
<td>–</td>
<td>–</td>
<td>6/8</td>
<td>–</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>1/5</td>
<td>–</td>
<td>–</td>
<td>2/10</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>2/5</td>
<td>–</td>
<td>–</td>
<td>4/10</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>3/5</td>
<td>–</td>
<td>–</td>
<td>6/10</td>
</tr>
<tr>
<td>3/3</td>
<td>4/4</td>
<td>5/5</td>
<td>6/6</td>
<td>8/8</td>
<td>10/10</td>
</tr>
</tbody>
</table>

2. In a family of equivalent fractions, the simplest fraction is the one with the lowest numerator and denominator.

Use the chart to find the simplest equivalent fraction for each of these:

- a \(\frac{5}{10}\) \(\frac{1}{2}\)
- b \(\frac{6}{8}\) \(\frac{3}{4}\)
- c \(\frac{4}{6}\) \(\frac{2}{3}\)
- d \(\frac{6}{10}\) \(\frac{3}{5}\)
Show each mixed number on the number line.

Improper fractions and mixed numbers

$4 \frac{1}{4}$  $4 \frac{3}{4}$  $5 \frac{1}{3}$  $5 \frac{6}{8}$  $6 \frac{1}{4}$  $6 \frac{7}{10}$  $7 \frac{4}{5}$  $8 \frac{1}{2}$  $8 \frac{9}{10}$

see Student Book page 78
1. What fraction of the total set of shapes are:

   a. triangles?  $\frac{3}{12} = \frac{1}{4}$
   b. small triangles?  $\frac{1}{12}$
   c. large triangles?  $\frac{2}{12} = \frac{1}{6}$
   d. circles?  $\frac{4}{12} = \frac{1}{3}$
   e. large circles?  $\frac{2}{12} = \frac{1}{6}$
   f. small circles?  $\frac{2}{12} = \frac{1}{6}$
   g. not circles?  $\frac{7}{12}$
   h. squares?  $\frac{3}{12} = \frac{1}{4}$
   i. large squares?  $\frac{1}{12}$
   j. not squares?  $\frac{8}{12} = \frac{2}{3}$
   k. hexagons?  $\frac{2}{12} = \frac{1}{6}$
   l. shaded?  $\frac{5}{12}$
   m. unshaded?  $\frac{7}{12}$
   n. four-sided?  $\frac{3}{12} = \frac{1}{4}$
   o. squares and hexagons?  $\frac{5}{12}$
   p. unshaded hexagons?  $\frac{1}{12}$
Perimeter

Draw each of the following shapes.

1. A square with perimeter 16 cm.
2. A square with perimeter 20 cm.
3. A rectangle with perimeter 16 cm.
4. A rectangle with perimeter 20 cm.

Possible rectangles are:

(a square is also a rectangle)
1. Here are some shapes on a 1 cm grid.

- Colour two shapes that have a perimeter of 12 cm.
- Which two shapes have a perimeter of 14 cm? A and E
- What is the area of Shape B? 7 cm²
- Which has the greater area: Shape A or Shape E? They are equal in area

2. The perimeter of this rectangle is 40 centimetres.

- Calculate the length of the rectangle. 13 cm
- What is the area of this rectangle? 91 cm²

3. What is the area of a square if its perimeter is:
   - 20 cm sides are 5 cm so area is 25 cm²
   - 64 cm sides are 16 cm so area is 256 cm²

see Student Book page 84
1. Fill in the missing numbers.

   a. 
   \[ \begin{array}{c}
   7 \\
   \times 10 \\
   \hline
   70 \\
   \times 10 \\
   \hline
   700 \\
   \times 10 \\
   \hline
   7000 \\
   \times 10 \\
   \hline
   70000 \\
   \end{array} \]

   b. 
   \[ \begin{array}{c}
   18 \\
   \times 10 \\
   \hline
   180 \\
   \times 10 \\
   \hline
   1800 \\
   \times 100 \\
   \hline
   180000 \\
   \end{array} \]

   c. 
   \[ \begin{array}{c}
   97 \\
   \times 100 \\
   \hline
   9700 \\
   \times 10 \\
   \hline
   97000 \\
   \times 10 \\
   \hline
   970000 \\
   \end{array} \]

2. Work out the missing operations.

   a. 
   \[ \begin{array}{c}
   12 \\
   \times 10 \\
   \hline
   120 \\
   \times 10 \\
   \hline
   1200 \\
   \times 100 \\
   \hline
   120000 \\
   \times 10 \\
   \hline
   1200000 \\
   \end{array} \]

   b. 
   \[ \begin{array}{c}
   23 \\
   \times 100 \\
   \hline
   2300 \\
   \times 10 \\
   \hline
   23000 \\
   \times 10 \\
   \hline
   230000 \\
   \end{array} \]

   c. 
   \[ \begin{array}{c}
   129 \\
   \times 10 \\
   \hline
   1290 \\
   \times 100 \\
   \hline
   129000 \\
   \div 100 \\
   \hline
   1290 \\
   \end{array} \]

Think!
Multiplying and dividing by 10 and 100

Complete this flow diagram.

Fill in one of the operations: \( \times 10, \times 100, \div 10 \) or \( \div 100 \) in each circle.

Write the correct numbers in the blocks.
1. Super electronics is having a half-price sale. Write the sale price of each item.

- **$210**
  - Now: **105**
- **Was $820**
  - Now: **$410**
- **Was $96**
  - Now: **$48**
- **Was $128**
  - Now: **$64**
- **Was $2700**
  - Now: **$1350**
- **Was $8300**
  - Now: **$4150**

2. The matching sides of the shapes on the right are double the length of those on the left. Write the missing lengths. Use a calculator to find the perimeter of all the shapes.

- \( P = 66 \)
- \( P = 132 \)
- \( P = 113 \)
- \( P = 226 \)
- \( P = 104 \)
- \( P = 208 \)
- \( P = 153 \)
- \( P = 306 \)
- \( P = 168 \)
- \( P = 336 \)

\[ P = 181 \]
\[ P = 23 \]
\[ P = 31 \]
\[ P = 37 \]
\[ P = 38 \]
\[ P = 28 \]
\[ P = 67 \]
\[ P = 17 \]
\[ P = 134 \]

see Student Book page 88
Draw the reflection of each shape on the other side of the dotted line (or mirror line). Notice the equal amounts of space between the image and the mirror line, and the reflection and the mirror line.

Remember: If there is space between the image and the mirror line, you need to leave the same amount of space between the reflection and the mirror line.
Draw each shape translated on the grid according to the instructions.

1. Translate the triangle forwards 4 blocks.

2. Slide the square down 3 blocks.

3. Translate this shape back 5 blocks.

4. Slide this shape forwards 3 blocks.

5. Translate this shape down 5 blocks and forwards 4 blocks.

6. Slide this shape forwards 7 blocks and up 1 block.

see Student Book page 94
Pairs of decimals that make 1

1. Find pairs of decimals that add up to 1.
   As you find each pair, cross out the numbers.

<table>
<thead>
<tr>
<th>0.8</th>
<th>0.45</th>
<th>0.9</th>
<th>0.65</th>
<th>0.19</th>
<th>0.76</th>
<th>0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.81</td>
<td>0.77</td>
<td>0.15</td>
<td>0.75</td>
<td>0.68</td>
<td>0.5</td>
<td>0.87</td>
</tr>
<tr>
<td>0.62</td>
<td>0.49</td>
<td>0.38</td>
<td>0.35</td>
<td>0.32</td>
<td>0.13</td>
<td>0.97</td>
</tr>
<tr>
<td>0.25</td>
<td>0.3</td>
<td>0.4</td>
<td>0.58</td>
<td>0.98</td>
<td>0.14</td>
<td>0.51</td>
</tr>
<tr>
<td>0.99</td>
<td>0.71</td>
<td>0.59</td>
<td>0.17</td>
<td>0.95</td>
<td>0.79</td>
<td>0.23</td>
</tr>
<tr>
<td>0.41</td>
<td>0.2</td>
<td>0.29</td>
<td>0.84</td>
<td>0.24</td>
<td>0.1</td>
<td>0.21</td>
</tr>
<tr>
<td>0.4</td>
<td>0.86</td>
<td>0.5</td>
<td>0.41</td>
<td>0.6</td>
<td>0.42</td>
<td>0.65</td>
</tr>
<tr>
<td>0.5</td>
<td>0.85</td>
<td>0.03</td>
<td>0.7</td>
<td>0.16</td>
<td>0.01</td>
<td>0.59</td>
</tr>
</tbody>
</table>

2. List all the numbers that are not crossed out. Next to each one, write how much you would need to add to it to make 1.

   - 0.77 + 0.23
   - 0.13 + 0.87
   - 0.17 + 0.83
   - 0.4 + 0.6
   - 0.5 + 0.5

see Student Book page 96
1. How much taller does each plant need to grow to be 10 cm tall?

- 3.6 cm
- 3.5 cm
- 7.7 cm
- 2.9 cm
- 1.8 cm
- 0.9 cm

2. Each barrel can hold 10 litres of water. How much more water can each one hold?

- 2.45 l
- 4.9 l
- 8.07 l
- 1.28 l
- 4.99 l

- 7.55 l
- 5.1 l
- 1.93 l
- 8.72 l
- 5.01 l

3. Each of these items was bought with a $10 note. How much change did each person get?

- $5.47
- $1.99
- $6.40
- $9.21

- $4.53
- $8.01
- $3.60
- $0.79

see Student Book page 97
**Decimal puzzles**

In a magic square the sum of each row, each column and each diagonal is the same.

1. **Grid A is a magic square with whole numbers.**
   - **a** Work out the missing number.
   - **b** Use the numbers in the magic square to make a decimal magic square in grid B. Each decimal should have one decimal place.
   - **c** Subtract 5.5 from each number in the decimal magic square. Write the answers in grid C. Is it still a magic square? **yes**

<table>
<thead>
<tr>
<th>Grid A</th>
<th>Grid B</th>
<th>Grid C</th>
</tr>
</thead>
<tbody>
<tr>
<td>226</td>
<td>22.6</td>
<td>17.1</td>
</tr>
<tr>
<td>221</td>
<td>22.1</td>
<td>16.6</td>
</tr>
<tr>
<td>222</td>
<td>22.2</td>
<td>16.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>219</th>
<th>21.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>224</td>
<td>22.4</td>
<td>16.4</td>
</tr>
<tr>
<td>225</td>
<td>22.5</td>
<td>16.8</td>
</tr>
<tr>
<td>220</td>
<td>22.0</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>17.2</th>
<th>16.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grid D shows another magic square.**

- **a** Find the missing numbers.
- **b** Halve each number and write the answers in Grid E.
- **c** Use the given number as a starting point to make a decimal magic square in Grid F. Each number must have two decimal places. The total of each row, column and diagonal must be 0.42.

<table>
<thead>
<tr>
<th>Grid D</th>
<th>Grid E</th>
<th>Grid F</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>1.55</td>
<td>0.17</td>
</tr>
<tr>
<td>9.6</td>
<td>4.8</td>
<td>0.06</td>
</tr>
<tr>
<td>8.3</td>
<td>4.15</td>
<td>0.19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12.2</th>
<th>0.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7</td>
<td>6.1</td>
<td>0.09</td>
</tr>
<tr>
<td>4.4</td>
<td>3.5</td>
<td>0.14</td>
</tr>
<tr>
<td>10.9</td>
<td>0.9</td>
<td>0.12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>0.22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
1. Complete the frequency table to show how many of each shape there are in this set.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearts</td>
<td>1111</td>
<td>14</td>
</tr>
<tr>
<td>Stars</td>
<td>1111</td>
<td>18</td>
</tr>
<tr>
<td>Rectangles</td>
<td>111</td>
<td>5</td>
</tr>
<tr>
<td>Moons</td>
<td>11111</td>
<td>19</td>
</tr>
<tr>
<td>Circles</td>
<td>111</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>67</td>
</tr>
</tbody>
</table>

2. Use the grouped frequency table to organise this set of test results.

<table>
<thead>
<tr>
<th>Results</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 2</td>
<td>0</td>
</tr>
<tr>
<td>3 – 4</td>
<td>4</td>
</tr>
<tr>
<td>5 – 6</td>
<td>10</td>
</tr>
<tr>
<td>7 – 8</td>
<td>11</td>
</tr>
<tr>
<td>9 – 10</td>
<td>8</td>
</tr>
</tbody>
</table>
Bar line graphs

Use these grids to draw the graphs for Student’s Book page 102.

Grid A

Number of marbles

Paul  Alan  Katie  Chris  Ian  Nina  Bhuddi  Alex  Monique  Laura

0  2  4  6  8  10  12  14  16

Grid B

Number of marbles

Red  Orange  Yellow  Green  Purple  Blue  Pink  Brown

0  4  8  12  16  20  24  28  32

see Student Book page 102
More line graphs

Grid A

Temperature (°C)

Time

8 9 10 11 12 1 2 3

Grid B

Number of people

Time

3 4 5 6 7 8 9
Mental division strategies

1 Try to calculate these in your head. Check your answers with a calculator.

<table>
<thead>
<tr>
<th></th>
<th>My answer</th>
<th>Calculator answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>$600 \div 10$</td>
<td>Own work</td>
<td></td>
</tr>
<tr>
<td>$60 \div 10$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1900 \div 100$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$190 \div 10$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$4000 \div 100$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$400 \div 100$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 What happens to the digits of any number divided by the following numbers?

a 10 Discussion. Check that the students realise that the digits move one or two place values when you divide by 10 or 100.

b 100

3 Now try these:

a 140 $\div 20 = \underline{7}$

b 480 $\div 60 = \underline{8}$

c 180 $\div 30 = \underline{6}$

b 720 $\div 90 = \underline{8}$

4 Write an instruction for a quick way to divide any number by 30.

Students own methods, but should understand that you can divide by 10 and then by 3 or vice versa.
In this grid the number sentences can be read from left to right and from top to bottom.

\[
\begin{align*}
60 & \div 4 = 15 \\
\div & \quad \div \quad \div \\
6 & \div 2 = 3 \\
= & \quad = \quad = \\
10 & \div 2 = 5
\end{align*}
\]

Use the numbers in the box to correctly complete each division grid.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>50</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
100 & \div 10 = 10 \\
\div & \quad \div \quad \div \\
2 & \div 1 = 2 \\
= & \quad = \quad = \\
50 & \div 10 = 5
\end{align*}
\]

\[
\begin{align*}
144 & \div 24 = 6 \\
\div & \quad \div \quad \div \\
16 & \div 8 = 2 \\
= & \quad = \quad = \\
9 & \div 3 = 3
\end{align*}
\]

see Student Book page 109
The sawmill

Planks 5 m long are delivered to the sawmill. The workers cut the planks into different lengths.

1. How long would each piece be in centimetres if they cut a plank into:
   a. 4 quarters? 125 cm
   b. 2 halves? 250 cm
   c. tenths? 50 cm
   d. 8 pieces? 62.5 cm

2. How many planks would be needed to cut each of the following sets of wood?
   How many pieces of wood are left over as scrap each time? How long are the pieces of scrap wood?
   a. 6 pieces, each 250 cm long 3 planks needed, 0 pieces scrap
   b. 9 pieces, each 150 cm long 3 planks needed, 3 pieces scrap, 0.5 m long
   c. 5 pieces, each 120 cm long 2 planks needed, 2 pieces scrap, 0.2 m and 3.8 m long

3. A plank was cut into eight equal pieces. Five pieces were sold. What length of wood was left over?
   1.875 m

4. Eight planks of wood were cut into 50 cm lengths. How many pieces of wood did this make?
   80 pieces of wood

see Student Book page 110
What will you do with the remainder?

Solve these problems. Decide whether it is more sensible to write the remainder as a fraction or leave it as a whole remainder.

1. A carpet layer has a huge roll of stair carpet 250 m long. He cuts it into 9 m lengths. He gets ________ pieces. with 7 m left over

2. A light aircraft flies 457 km using 8 barrels of fuel. It travels ________ kilometres for each barrel.

3. Two children are wrapping gifts.
   a. They cut 250 cm of ribbon into 10 pieces. Each piece is ________ long.
   b. How many 20 cm long ribbons can they cut from a length of 250 cm? ________ with a 10 cm piece left over

4. $75 is divided equally between 4 people. Each person gets $18.75.

5. Suggest 3 other ways to divide $75 into equal amounts.
   $75 ÷ 2 = $37.50    $75 ÷ 6 = $12.50
   $75 ÷ 3 = $25       $75 ÷ 10 = $7.50
   $75 ÷ 5 = $15

see Student Book page 112
Trace and cut out this net.

Use it to make a cube.

see Student Book page 115
In an hour a birdwatcher saw these birds:

4 pigeons
6 ducks
12 starlings
24 sparrows
2 wild geese
1 owl.

1. Write down the ratio of:
   a. starlings to pigeons \( \frac{12}{4} = 3 : 1 \)
   b. wild geese to starlings \( \frac{2}{12} = 1 : 6 \)
   c. ducks to starlings \( \frac{6}{12} = 1 : 2 \)
   d. sparrows to each of the other birds
      \( \frac{24}{2} = 6 : 1; \frac{24}{6} = 4 : 1; \frac{24}{12} = 2 : 1; \frac{24}{2} = 12 : 1; \frac{24}{1} = 24 : 1 \)

In a survey of water birds, these were the ratios:

ducks to geese 6 to 1
ducks to swans 5 to 1

2. If there were 30 ducks, how many geese and swans were there?

   5 geese 6 swans

3. If 12 ducks flew away, what would the new ratio be of:
   a. ducks to geese? \( \frac{18}{5} \)
   b. ducks to swans? \( \frac{18}{6} = 3 : 1 \)
Colour each pattern in the given proportions

- $\frac{1}{2}$ yellow, $\frac{1}{2}$ blue
- $\frac{1}{2}$ red, $\frac{1}{4}$ green
- $\frac{1}{4}$ yellow, $\frac{1}{4}$ red
- $\frac{1}{4}$ red, $\frac{1}{4}$ blue
- $\frac{3}{4}$ red, $\frac{1}{8}$ yellow
- $\frac{1}{4}$ red, $\frac{1}{4}$ green
- $\frac{1}{4}$ red, $\frac{1}{4}$ blue
- $\frac{5}{16}$ green, $\frac{1}{2}$ blue
- $\frac{1}{4}$ red, $\frac{6}{16}$ yellow

see Student Book page 119
1. List 14 ratios to compare these children.
   
   For example, boys to girls is 6 to 8.

   Own work

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

2. A supermarket sells both products in special packs:

   2 bottles of shampoo with 1 free bottle of conditioner.

   3 bottles of bath foam with 1 free bottle of lotion.

   What is the ratio of:

   a  conditioner bottles to shampoo bottles?  1:2
   b  body lotion bottles to bath foam bottles?  1:3

see Student Book page 122
The students at a school want to make chocolate cakes to sell at the school fete.

This is the recipe for making one cake.

### Ingredients:
- 100 g margarine
- 150 g sugar
- 100 g self-raising flour
- 120 g dark chocolate
- 2 eggs

1. A class wants to bake 10 cakes. How much of each ingredient will they need?
   - 1000 g margarine (1 kg)
   - 1500 g sugar (1.5 kg)
   - 1000 g self-raising flour (1 kg)
   - 1200 g dark chocolate (1.2 kg)
   - 20 eggs

2. If a class has 12 eggs and as much of the other ingredients as they need, how many cakes can they bake? **6**

3. What mass of sugar will a class need to make 8 cakes? **1200 g or 1.2 kg**

4. One class sells one cake for $8.75. How much money will they make if they sell:
   - **a** 10 cakes **$87.50**
   - **b** 8 cakes **$70.00**
   - **c** 25 cakes **$218.75**
   - **d** 100 cakes? **$875.00**

5. Sanjay’s class sold their cakes for $8 each. If they raised $232.00, how many cakes did they sell? **29**

See Student Book page 123
Shade the bubbles different colours. Then write the percentage of bubbles in each colour.  

Red _______________  Orange _______________  Yellow _______________
Green _______________  Blue _______________  Purple _______________
Grey _______________  Black _______________  Other _______________
Problems involving percentages

1 Shade the correct percentage of each $10 \times 10$ square.
   a 15%  
   b 20%  
   c 1%

2 Shade the correct percentage of each shape.
   (Hint: Convert the percentage to a fraction and simplify it!)
   a 25%  
   b 40%  
   c 75%

3 Complete the sentences.
   a Half is the same as ____50_____.
   b A quarter is the same as ____25_____.
   c One-tenth is the same as ____10_____.
   d Three-fifths is the same as ____60_____.

4 Work out these amounts.
   a 100% of $5$ is ____$5$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$$\ldots$
Percentages, decimals and fractions

A number can be written as a fraction, decimal or percentage.

For example, $\frac{1}{2} = 0.5 = 50\%$.

1. Complete the chart.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Decimal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{1}{2}$</td>
<td>0.5</td>
<td>50%</td>
</tr>
<tr>
<td>$\frac{1}{10}$</td>
<td>0.1</td>
<td>20%</td>
</tr>
<tr>
<td>$\frac{4}{10}$</td>
<td>0.4</td>
<td>40%</td>
</tr>
<tr>
<td>$\frac{7}{10}$</td>
<td>0.7</td>
<td>70%</td>
</tr>
<tr>
<td>$\frac{2}{100} = \frac{1}{50}$</td>
<td>0.02</td>
<td>2%</td>
</tr>
<tr>
<td>$\frac{17}{100}$</td>
<td>0.17</td>
<td>17%</td>
</tr>
<tr>
<td>$\frac{27}{100}$</td>
<td>0.27</td>
<td>27%</td>
</tr>
<tr>
<td>$\frac{88}{100} = \frac{22}{25}$</td>
<td>0.88</td>
<td>88%</td>
</tr>
<tr>
<td>$\frac{a}{10}$</td>
<td>0.9</td>
<td>90%</td>
</tr>
<tr>
<td>$\frac{45}{100} = \frac{9}{20}$</td>
<td>0.45</td>
<td>45%</td>
</tr>
<tr>
<td>$\frac{6}{10} = \frac{3}{5}$</td>
<td>0.6</td>
<td>60%</td>
</tr>
</tbody>
</table>

2. Show where each of these fractions would fit on the 0–100\% line

Students own work
Allow them to check each other’s placement and to discuss any discrepancies.

see Student Book page 125
Remember: To convert a fraction to a decimal, you divide the numerator by the denominator.

For example, \( \frac{1}{4} = 1 \div 4 = 0.25 \)

This is a fraction wheel for \( \frac{1}{2} \). It shows equivalent fractions and decimals. There are other fractions which could go on this wheel, for example, \( \frac{10}{20}, \frac{8}{16} \) or \( \frac{50}{100} \).

Complete these equivalent fraction wheels. Own work

1

\[
\begin{array}{ccc}
\text{a} & \text{b} & \text{c} \\
\frac{1}{4} & \frac{1}{5} & \frac{1}{10} \\
\end{array}
\]

2

\[
\begin{array}{ccc}
\text{a} & \text{b} & \text{c} \\
\frac{3}{4} & \frac{2}{5} & \frac{3}{10} \\
\end{array}
\]
1. Complete this table.

<table>
<thead>
<tr>
<th>Tenths</th>
<th>Decimal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10</td>
<td>0.1</td>
<td>10%</td>
</tr>
<tr>
<td>2/10</td>
<td>0.2</td>
<td>20%</td>
</tr>
<tr>
<td>3/10</td>
<td>0.3</td>
<td>30%</td>
</tr>
<tr>
<td>4/10</td>
<td>0.4</td>
<td>40%</td>
</tr>
<tr>
<td>5/10</td>
<td>0.5</td>
<td>50%</td>
</tr>
<tr>
<td>6/10</td>
<td>0.6</td>
<td>60%</td>
</tr>
<tr>
<td>7/10</td>
<td>0.7</td>
<td>70%</td>
</tr>
<tr>
<td>8/10</td>
<td>0.8</td>
<td>80%</td>
</tr>
<tr>
<td>9/10</td>
<td>0.9</td>
<td>90%</td>
</tr>
<tr>
<td>10/10</td>
<td>1</td>
<td>100%</td>
</tr>
</tbody>
</table>

2. Arrange each set of fractions in order from smallest to greatest.

a. 0.25, 3/4, 2/10, 0, 0.7, 50%, 0, 2/5, 0.25, 50%, 0.7, 3/4

b. 9/10, 75%, 0.8, 1/2, 25%, 2/5, 1/2, 75%, 0.8, 9/10

c. 60%, 0.66, 6/100, 1/2, 0.4, 1/2, 60%, 0.66

3. Write down two numbers from each set above that have a sum of 1.

Set A: 0.25 + 3/4 = 1
Set B: 75% + 25% = 1
Set C: 0.4 + 60% = 1

4. a. Write down the highest and lowest value in each set.

   Set A: 0 and 3/4
   Set B: 25% and 9/10
   Set C: 6/100 and 0.66

b. Calculate the difference between the two values.

   A: 3/4
   B: 65/100
   C: 60/100

c. Show the differences on this number line.

- Own work
Likely and unlikely events

Draw lines to match the events to the correct place on the scale. **Answers will vary**

<table>
<thead>
<tr>
<th>Certain</th>
<th>Likely</th>
<th>Even chance</th>
<th>Unlikely</th>
<th>Impossible</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image of an actor]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>There will be 29 days in February this year</td>
<td>I will become a famous actor</td>
<td>Next year I will be older than I am now</td>
<td>I’ll read a book this week</td>
<td>It will rain tomorrow</td>
</tr>
<tr>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>I will play sports this week</td>
<td>I will eat fruit today</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
<tr>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
<td>![Image of a person]</td>
</tr>
</tbody>
</table>

see Student Book page 130
Choose your method

1. Here are some multiplications. Try and solve them without a calculator. Choose your own method.

   a  $4 \times 239 = \underline{956}$
   b  $332 \times 7 = \underline{2324}$
   c  $155 \times 9 = \underline{1395}$

   ____________________  ____________________  ____________________
   ____________________  ____________________  ____________________

   d  $469 \times 6 = \underline{2814}$
   e  $497 \times 4 = \underline{1988}$
   f  $199 \times 9 = \underline{1791}$

   ____________________  ____________________  ____________________
   ____________________  ____________________  ____________________

2. Mr Musa’s electric shop orders some electronic equipment. Work out the total cost of each order.

   a  9 TV sets at $114 each.  b  7 camcorders at $799 each.
   $1026  $5593
   ____________________  ____________________
   ____________________  ____________________

   c  925 washers at 9c each.  d  8 extension cables at $8.99 each.
   $83.25  $71.92
   ____________________  ____________________
   ____________________  ____________________

see Student Book page 133
Find the area

Work out the area of each field. Do your working inside the fields.

Remember Area = length \times breadth

- 27 m \times 19 m = 513 m^2
- 82 m \times 43 m = 3526 m^2
- 94 m \times 17 m = 1598 m^2
- 62 m \times 78 m = 4836 m^2
- 75 m \times 91 m = 6825 m^2

see Student Book page 134
**Multiplying decimals**

Complete this multiplication table.

<table>
<thead>
<tr>
<th>x</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>1.1</td>
<td>2.2</td>
<td>3.3</td>
<td>4.4</td>
<td>5.5</td>
<td>6.6</td>
<td>7.7</td>
<td>8.8</td>
<td>9.9</td>
</tr>
<tr>
<td>1.8</td>
<td>3.6</td>
<td>5.4</td>
<td>7.2</td>
<td>9</td>
<td>10.8</td>
<td>12.6</td>
<td>14.4</td>
<td>16.2</td>
</tr>
<tr>
<td>1.7</td>
<td>3.4</td>
<td>5.1</td>
<td>6.8</td>
<td>8.5</td>
<td>10.2</td>
<td>11.9</td>
<td>13.6</td>
<td>15.3</td>
</tr>
<tr>
<td>2.3</td>
<td>4.6</td>
<td>6.9</td>
<td>9.2</td>
<td>11.5</td>
<td>13.8</td>
<td>16.1</td>
<td>18.4</td>
<td>20.7</td>
</tr>
<tr>
<td>2.5</td>
<td>5</td>
<td>7.5</td>
<td>10</td>
<td>12.5</td>
<td>15</td>
<td>17.5</td>
<td>20</td>
<td>22.5</td>
</tr>
<tr>
<td>2.9</td>
<td>5.8</td>
<td>8.7</td>
<td>11.6</td>
<td>14.5</td>
<td>17.4</td>
<td>20.3</td>
<td>23.2</td>
<td>26.1</td>
</tr>
<tr>
<td>3.0</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>18</td>
<td>21</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>3.1</td>
<td>6.2</td>
<td>9.3</td>
<td>12.4</td>
<td>15.5</td>
<td>18.6</td>
<td>21.7</td>
<td>24.8</td>
<td>27.9</td>
</tr>
<tr>
<td>3.3</td>
<td>6.9</td>
<td>9.9</td>
<td>13.2</td>
<td>16.5</td>
<td>19.8</td>
<td>23.1</td>
<td>26.4</td>
<td>29.7</td>
</tr>
<tr>
<td>3.7</td>
<td>7.4</td>
<td>11.1</td>
<td>14.8</td>
<td>18.5</td>
<td>22.2</td>
<td>25.9</td>
<td>29.6</td>
<td>33.3</td>
</tr>
<tr>
<td>4.5</td>
<td>9</td>
<td>13.5</td>
<td>18</td>
<td>22.5</td>
<td>27</td>
<td>31.5</td>
<td>36</td>
<td>40.5</td>
</tr>
<tr>
<td>4.8</td>
<td>9.6</td>
<td>14.4</td>
<td>19.2</td>
<td>24</td>
<td>28.8</td>
<td>33.6</td>
<td>38.4</td>
<td>43.2</td>
</tr>
<tr>
<td>5.9</td>
<td>11.8</td>
<td>17.7</td>
<td>23.6</td>
<td>29.5</td>
<td>35.4</td>
<td>41.3</td>
<td>47.2</td>
<td>53.1</td>
</tr>
<tr>
<td>7.2</td>
<td>14.4</td>
<td>21.6</td>
<td>28.8</td>
<td>36</td>
<td>43.2</td>
<td>50.4</td>
<td>57.6</td>
<td>64.8</td>
</tr>
<tr>
<td>9.6</td>
<td>19.2</td>
<td>28.8</td>
<td>38.4</td>
<td>48</td>
<td>57.6</td>
<td>67.2</td>
<td>76.8</td>
<td>86.4</td>
</tr>
<tr>
<td>9.9</td>
<td>19.8</td>
<td>29.7</td>
<td>39.6</td>
<td>49.5</td>
<td>59.4</td>
<td>69.3</td>
<td>79.2</td>
<td>89.1</td>
</tr>
</tbody>
</table>

*see Student Book page 137*
**Work out the mass**

The mass of each item is given.

*Work out the mass of each pile.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 blocks</td>
<td>16 kg</td>
</tr>
<tr>
<td>9 planks</td>
<td>25.2 kg</td>
</tr>
<tr>
<td>3 bag of nails</td>
<td>3.3 kg</td>
</tr>
<tr>
<td>7 coils of rope</td>
<td>44.8 kg</td>
</tr>
<tr>
<td>2 blocks + 3 bags of nails</td>
<td>9.7 kg</td>
</tr>
<tr>
<td>2 of each item</td>
<td>27 kg</td>
</tr>
<tr>
<td>5 of each item</td>
<td>67.5 kg</td>
</tr>
</tbody>
</table>

*see Student Book page 138*
**1** Complete these mixed operations.

a \( \frac{1}{3} \) of \((200 - 50)\) 50

b \((100 + 44) ÷ 12\) 12

c \((10 + 4 \times 4) + (17 + 3 \times 8)\) 201

d \(18 ÷ 3 + 8 \times 2 + 25 ÷ 5\) 27

e \(\frac{1}{2} \) of \(18 + 19 + 20 + 21\) 69

f \(\frac{1}{2} \) of \(22 - \frac{1}{2} \) of \(16\) 3

g \(\frac{3}{4} \) of \(66\) + 55 ÷ 11 54.5

h \(43 + 19 + 15 + 200 ÷ 2 \times 5\) 577

i \(10 \times (16 - 6)\) 100

j \(4 \times 4 + 4 \times 4 + 5 \times 5\) 57

k \(\frac{1}{2} \) of \(50 + 3 \) of \(100\) 100

l \(7 \times 30 + 2 \times 40\) 290

m \(\frac{3}{4} \) of \(16 + \frac{1}{4} \) of \(16\) 16

n \((10 + 10 + 10 + 10 + 10 + 10) ÷ 5\) 12

---

2 Complete these problems. You will first need to write the number sentence, then find the answer.

a Jenny organises a cherry-picking expedition and picnic. The following people confirm they will join her: Mary and her two sisters, James and his four cousins, Leah and her brother and mother. Jenny needs to take one picnic basket for every two people. How many picnic baskets must she take? \((1 + 1 + 2 + 1 + 4 + 1 + 2) ÷ 2 = 6\) baskets

b Three friends go out for a meal. They add up the items on the bill and then split the total evenly between them. The items on the bill are as follows: two starters at $6.45 each, three main dishes which cost $8.99, $7.35 and $10.50, and one dessert which costs $9.00. How much must each person pay? \((2 \times 6.45 + 8.99 + 7.35 + 10.50 + 9.00) ÷ 3 = $16.25\)

c Class A has 32 students and Class B has 28 students. \(\frac{3}{4} \) of the students from each class go on the school outing. How many students go altogether? \(\frac{3}{4} \) of 32 + \(\frac{3}{4} \) of 28 = 45

see Student Book page 141