

# ‘Working At’

## Activity Booklet 4 Answers

	The possible combinations and extra calculations are:				
<b>Activity 1.1 Talk Maths</b>	<b>-8 to 3 = 11</b>	<b>-8 to 5 = 13</b>	<b>-8 to 4 = 12</b>	<b>-8 to 2 = 10</b>	<b>-8 to 6 = 14</b>
	(-8 + 11 = 3; 3 - 11 = -8)	(-8 + 13 = 5; 5 - 13 = -8)	(-8 + 12 = 4; 4 - 12 = -8)	(-8 + 10 = 2; 2 - 10 = -8)	(-8 + 14 = 6; 6 - 14 = -8)
	<b>-4 to 3 = 7</b>	<b>-4 to 5 = 9</b>	<b>-4 to 4 = 8</b>	<b>-4 to 2 = 6</b>	<b>-4 to 6 = 10</b>
	(-4 + 7 = 3; 3 - 7 = -4)	(-4 + 9 = 5; 5 - 9 = -4)	(-4 + 8 = 4; 4 - 8 = -4)	(-4 + 6 = 2; 2 - 6 = -4)	(-4 + 10 = 6; 6 - 10 = -4)
	<b>-6 to 3 = 9</b>	<b>-6 to 5 = 11</b>	<b>-6 to 4 = 10,</b>	<b>-6 to 2 = 8</b>	<b>-6 to 6 = 12</b>
	(-6 + 9 = 3; 3 - 9 = -6)	(-6 + 11 = 5; 5 - 11 = -6)	(-6 + 10 = 4; 4 - 10 = -6)	(-6 + 8 = 2; 2 - 8 = -6)	(-6 + 12 = 6; 6 - 12 = -6)
	<b>-9 to 3 = 12</b>	<b>-9 to 5 = 14</b>	<b>-9 to 4 = 13</b>	<b>-9 to 2 = 11</b>	<b>-9 to 6 = 15</b>
	(-9 + 12 = 3; 3 - 12 = -9)	(-9 + 14 = 5; 5 - 14 = -9)	(-9 + 13 = 4; 4 - 13 = -9)	(-9 + 11 = 2; 2 - 11 = -9)	(-9 + 15 = 6; 6 - 15 = -9)
	<b>-7 to 3 = 10</b>	<b>-7 to 5 = 12</b>	<b>-7 to 4 = 11</b>	<b>-7 to 2 = 9</b>	<b>-7 to 6 = 13</b>
	(-7 + 10 = 3; 3 - 10 = -7)	(-7 + 12 = 5; 5 - 12 = -7)	(-7 + 11 = 4; 4 - 11 = -7)	(-7 + 9 = 2; 2 - 9 = -7)	(-7 + 13 = 6; 6 - 13 = -7)
<b>Activity 1.2 Key Skills</b>	While playing the game, encourage the children to talk about the methods they are using to find numbers which have the target difference. Use the number line to support as needed.				
<b>Activity 1.3 Using and Applying</b>	<ol style="list-style-type: none"> <li>1. The missing numbers are -20 and 4.</li> <li>2. The numbers in the number sequence are increasing by 11 each time so the missing numbers in the sequence are -1, 10, 21, 32 and 43.</li> <li>3. The difference between the highest and lowest temperatures measured on the bar chart is 15°C.</li> </ol>				

**Assess and Review 1.4**

Encourage the children to notice that the child answering the question has circled the numbers -5 and 3 which have a difference of 8. Ask the children to give any combinations of numbers on the number line which do have a difference of 9, such as -5 and 4.

**Activity 2.1  
Talk Maths**



$$63 \div 7 = 9$$



$$12 \times 9 = 108$$



$$108 \times 63 = 6,804$$

<p><b>Activity 2.2</b> Key Skills</p>	<p>Andy has some x-ray spectacles in a box. He adds 16 to this number and then multiplies this number by five. This gives the number 100. How many x-ray spectacles were in the box?</p> <p><b>4 x-ray spectacles</b></p>	<p>Ugo uses some fireballs during target practice. He adds 37 to the number of fireballs and then divides this number by five. This gives the number 13. How many fireballs did he use?</p> <p><b>28 fireballs</b></p>
	<p>The superheroes rescue some bags of stolen jewels. They add 23 to the number of bags and then divide this number by four. This gives the number 11. How many bags did they rescue?</p> <p><b>21 bags</b></p>	<p>Alex practises flying for some minutes. She subtracts 45 from the number of minutes and then multiplies this number by three. This gives the number 30. How many minutes did Alex practise flying for?</p> <p><b>55 minutes</b></p>
	<p>Ellie rescues some people. She subtracts 7 from the number of people and then divides this number by three. This gives the number 12. How many people did Ellie rescue?</p> <p><b>43 people</b></p>	<p>Chloe jumps over some cars. She adds 27 to the number of cars and then multiplies this number by two. This gives the number 74. How many cars did Chloe jump over?</p> <p><b>10 cars</b></p>
	<p>The superheroes buy some new gadgets. They subtract 42 from the number of new gadgets and then multiply this number by four. This gives the number 232. How many new gadgets did they buy?</p> <p><b>100 gadgets</b></p>	<p>Rosie defeated some villains. She adds 17 to the number of villains and then divides this number by three. This gives the number 23. How many villains did Rosie defeat?</p> <p><b>52 villains</b></p>
<p><b>Activity 2.3</b> Using and Applying</p>	<p>1. <math>5.3 \times 3 = 15.9</math>  <math>15.9 - 5.9 = 10</math>  <math>10 \times 2 = 20</math></p> <p>2. <math>£20 - £9.28 = £10.72</math>  <math>£10.72 \div 4 = £2.68</math></p>	

<b>Assess and Review 2.4</b>	Encourage the children to notice that the child answering the question hasn't completed the short division step of the word problem correctly. The correct answer is 315 marbles.
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<b>Activity 3.1 Talk Maths</b>	<p>The matching superheroes and badges are:</p> <p>20% of 150 = 30, 5% of 120 = 6, 50% of 42 = 21, 75% of 56 = 42, 25% of 400 = 100</p> <p>10% of the badges are:</p> <p>10% of 42 = 4.2, 10% of 100 = 10, 10% of 6 = 0.6, 10% of 30 = 3, 10% of 21 = 2.1</p>
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<b>Activity 3.2 Key Skills</b>	<p>The matching equivalent cards are:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>10% of</th> <th>20% of</th> <th>25% of</th> <th>50% of</th> <th>75% of</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>4</td> <td>8</td> <td>10</td> <td>20</td> <td>30</td> </tr> <tr> <td>80</td> <td>8</td> <td>16</td> <td>20</td> <td>40</td> <td>60</td> </tr> <tr> <td>120</td> <td>12</td> <td>24</td> <td>30</td> <td>60</td> <td>90</td> </tr> <tr> <td>160</td> <td>16</td> <td>32</td> <td>40</td> <td>80</td> <td>120</td> </tr> </tbody> </table>		10% of	20% of	25% of	50% of	75% of	40	4	8	10	20	30	80	8	16	20	40	60	120	12	24	30	60	90	160	16	32	40	80	120
	10% of	20% of	25% of	50% of	75% of																										
40	4	8	10	20	30																										
80	8	16	20	40	60																										
120	12	24	30	60	90																										
160	16	32	40	80	120																										

<b>Activity 3.3 Using and Applying</b>	<ol style="list-style-type: none"> <li>Accept any 6 parts of the grid that are shaded to show 10%.</li> <li>There is a 20% difference between 15% and 35%. 20% of 200 = 40 40 more children travelled by aeroplane than car.</li> <li>20% of 73 is 14.6 people and you can't count 0.6 of a person.</li> </ol>
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<b>Assess and Review 3.4</b>	Encourage the children to notice that the child answering the question hasn't compared the two pieces of information correctly. 45 out of 90 is 50% so the correct answer is that Hassan scored 5% more than Kate.
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<p><b>Activity 4.1 Talk Maths</b></p>	<ol style="list-style-type: none"> <li>1. Chloe finished the flying sprint in second place.</li> <li>2. Alex finished in fourth place in the endurance flying race.</li> <li>3. Rosie finished 0.9 of a second ahead of Alex in the flying sprint. Also accept <math>\frac{9}{10}</math> of a second or 9 tenths.</li> </ol>
<p><b>Activity 4.2 Key Skills</b></p>	<p>While playing the game, encourage the children to model how they are calculating the durations between the two clocks by using number lines.</p>
<p><b>Activity 4.3 Using and Applying</b></p>	<ol style="list-style-type: none"> <li>1. There are 2,880 minutes in two days. <math>(60 \times 24) \times 2 = 2,880</math></li> <li>2. Aneesha took 40 minutes and 57 seconds to complete the sponsored run.</li> <li>3. The film finished at 21:20.</li> </ol>
<p><b>Assess and Review 4.4</b></p>	<p>Encourage the children to notice that the child answering the question has incorrectly calculated the time duration from 18:24 to 19:00 as 34 minutes. This is a duration of 36 minutes. The correct answer to the problem is 111 minutes or 1 hour and 51 minutes.</p>

	<b>True</b>	<b>False</b>
<b>Activity 5.1 Talk Maths</b>	$\frac{1}{2}$ of the gemstones recovered were rubies.	$\frac{1}{4}$ of the gemstones recovered were diamonds.
	$\frac{1}{8}$ of the gemstones recovered were diamonds.	50% of the gemstones recovered were sapphires.
	There were more rubies recovered than emeralds.	25% of the gemstones recovered were emeralds.
	$\frac{1}{4}$ of the gemstones recovered were sapphires.	There were more sapphires recovered than rubies.
	The number of diamonds and emeralds recovered was equal.	There was an equal amount of emeralds and rubies collected.
	<b>Extra Challenge:</b> 20 rubies, 10 sapphires, 5 emeralds and 5 diamonds.	
<b>Activity 5.2 Key Skills</b>	While completing the activity, ask the children to talk about the features of a pie chart and the type of data it is used to represent (discrete data). Ask them to give examples of data they have seen represented in pie charts.	
<b>Activity 5.3 Using and Applying</b>	<ol style="list-style-type: none"> <li>Answers depend on the data collected in the previous activity.</li> <li> <ol style="list-style-type: none"> <li>8 of the dice rolls were a number three.</li> <li>28 of the dice rolls were a number two.</li> </ol> </li> </ol>	
<b>Assess and Review 5.4</b>	Encourage the children to notice that although the child has identified that $\frac{1}{4}$ is less than the fraction shown in the first pie chart, they have not taken into account that the total number of children questioned is different. In class 1, 9 children chose sandwiches whereas 10 children in class 2 chose sandwiches.	