

Activity Booklet 5 Answers

Activity 1.1 Talk Maths	<p>The superhero flags have been enlarged by the following scale factors:</p> <ol style="list-style-type: none">Scale factor of 3 (width of 4 becomes width of 12)Scale factor of 2 (width of 5 becomes width of 10)Scale factor of 2.5 (width of 6 becomes width of 15) <p>Extra Challenge:</p> <ol style="list-style-type: none">Width of 36, length of 27Width of 20, length of 8Width of 37.5 and length of 12.5
Activity 1.2 Key Skills	<p>While playing the game, encourage the children to talk about how they are identifying the ratio, talking about the relative sizes of the two groups of circles. Ensure that they understand the difference between ratio and proportion.</p>
Activity 1.3 Using and Applying	<ol style="list-style-type: none">1.4840g <p>The children need to multiply the amount of chopped pepper needed for three servings by three to find the amount needed for nine servings. 280g multiplied by 3 is 840g.</p> <ol style="list-style-type: none">40cm <p>The model of the statue has dimensions that are $\frac{1}{4}$ of the original (4 metres reduced to 1 metre). This is a scale factor of 0.25. The width of the model is $\frac{1}{4}$ of 1.6m which is 40cm. Ensure children give their final answer in centimetres.</p>
Assess and Review 1.4	<p>Encourage the children to notice that the child answering the question has not enlarged the length of the triangle three times, instead they have just added 3cm onto the length. The correct measurement of the enlarged length is 9cm multiplied by 3 which is 27cm.</p>

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<p>Activity 2.1 Talk Maths</p>	<p>1. True = $(3 \times 4) + 8 = 20$</p> <p>2. False = $(2 \times 4) + 6 = 20$ The correct answer is 14.</p> <p>3. True = $(5 \times 3) + 5 = 20$</p> <p>4. False = $3 + (2 \times 4) = 20$ The correct answer is 11.</p> <p>5. True = $6 + (2 \times 7) = 20$</p>												
<p>Activity 2.2 Key Skills</p>	<p>While playing the game, encourage the children to talk about the order they are doing the operations in.</p> <table border="1"> <tr> <td>$(9 \times 2) + 3 = 21$</td> <td>$(8 \times 3) + 5 = 29$</td> </tr> <tr> <td>$172 \div (2.5 + 1.5) = 43$</td> <td>$147 \div (5 - 1.5) = 42$</td> </tr> <tr> <td>$94 - (28 + 8) = 58$</td> <td>$92 - (3 \times 9) = 65$</td> </tr> <tr> <td>$33 + (60 \div 12) = 38$</td> <td>$19 + (70 - 22) = 67$</td> </tr> <tr> <td>$41 + (4 \times 7) = 69$</td> <td>$61 + (33 \div 3) = 72$</td> </tr> <tr> <td>$(16.8 \div 2) \times 10 = 84$</td> <td>$(46 \times 4) \div 2 = 92$</td> </tr> </table>	$(9 \times 2) + 3 = 21$	$(8 \times 3) + 5 = 29$	$172 \div (2.5 + 1.5) = 43$	$147 \div (5 - 1.5) = 42$	$94 - (28 + 8) = 58$	$92 - (3 \times 9) = 65$	$33 + (60 \div 12) = 38$	$19 + (70 - 22) = 67$	$41 + (4 \times 7) = 69$	$61 + (33 \div 3) = 72$	$(16.8 \div 2) \times 10 = 84$	$(46 \times 4) \div 2 = 92$
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<p>Activity 2.3 Using and Applying</p>	<p>1. $75 \times \boxed{4} - 75 = 225$ $(30 - \boxed{6}) \times 10 = 240$</p> <p>2.</p> <table border="1"> <tr> <td>$100 - (20 \times 3)$ 40</td> <td>></td> <td>$(6 \times 10) - (2 \times 12)$ 36</td> </tr> <tr> <td>$120 - (8 \times 7)$ 64</td> <td>=</td> <td>$(100 - (4 \times 9))$ 64</td> </tr> <tr> <td>$(100 - 17) + (7 \times 6)$ 125</td> <td><</td> <td>$1,000 \div (60 \div 12)$ 200</td> </tr> <tr> <td>$(100 \div 10) + (11 \times 7)$ 87</td> <td>></td> <td>$(120 \div 10) + (9 \times 8)$ 84</td> </tr> </table>	$100 - (20 \times 3)$ 40	>	$(6 \times 10) - (2 \times 12)$ 36	$120 - (8 \times 7)$ 64	=	$(100 - (4 \times 9))$ 64	$(100 - 17) + (7 \times 6)$ 125	<	$1,000 \div (60 \div 12)$ 200	$(100 \div 10) + (11 \times 7)$ 87	>	$(120 \div 10) + (9 \times 8)$ 84
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<p>Assess and Review 2.4</p>	<p>Encourage the children to notice that the child answering the question has repeated the number 500 as it is used repeatedly in the calculation. This would be correct if the operation were addition rather than multiplication. Discuss how the correct missing number is 2.</p>												

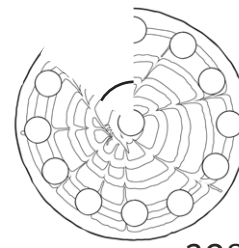
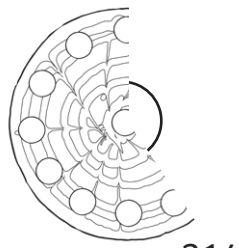
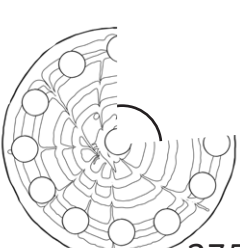
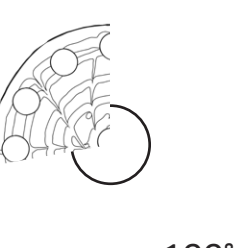
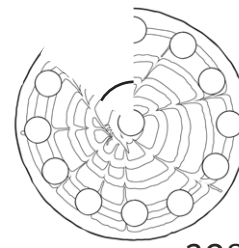
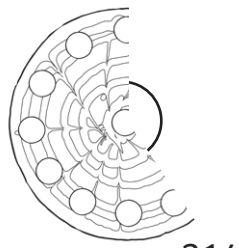
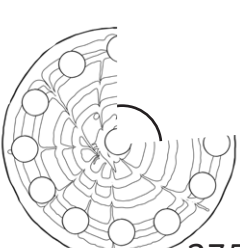
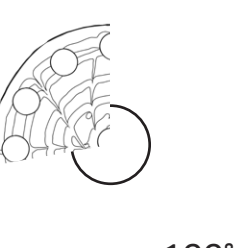
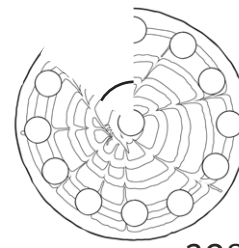
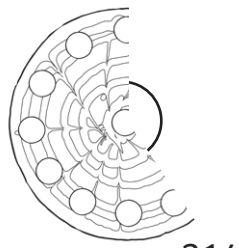
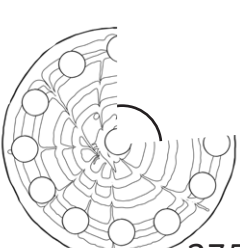
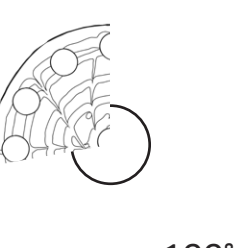
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Activity 3.1 Talk Maths		Rolled Oats	Peanut Butter (Extra Challenge)
	20 snack bars	400g	240g
	5 snack bars	100g	60g
	30 snack bars	600g	360g
	15 snack bars	300g	180g

Activity 3.2 Key Skills	<p>I make a superhero cape using a repeating pattern of 2 red strips of fabric followed by 3 green strips. On a cape of 100 strips, how many are red?</p> <p style="text-align: right;">40</p>	<p>At the superhero superstore, 3 x-ray specs are sold for every 5 capes. How many capes are sold if 30 x-ray specs are sold?</p> <p style="text-align: right;">50</p>
	<p>There are 48 superheroes at the hero base. The ratio of boys to girls is 1:3. How many girls are there at the base?</p> <p style="text-align: right;">36</p>	<p>In a bag of gemstones, there are five blue gems for every two yellow gems. In a bag of 35 gemstones, how many are blue?</p> <p style="text-align: right;">25</p>
	<p>A snack bar uses 2 cups of oats to 1 spoon of peanut butter. If I use 2 spoons of peanut butter, how many cups of oats will I need?</p> <p style="text-align: right;">4</p>	<p>A fruit smoothie recipe uses 1.5 cups of apple juice for every 2 cups of orange juice. If I use 6 cups of apple juice how many cups of orange juice will I need?</p> <p style="text-align: right;">8</p>
	<p>In the super-shoe shop, there are 4 pairs of spring shoes for every 7 pairs of flying boots. How many pairs of spring shoes are there if there are 77 pairs of flying boots and spring shoes altogether?</p> <p style="text-align: right;">28</p>	<p>In the superhero superstore, there are 3 capes for every 5 goggles. How many goggles are there if there are 32 capes and goggles altogether?</p> <p style="text-align: right;">20</p>

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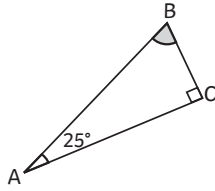
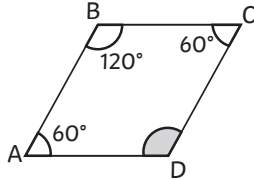
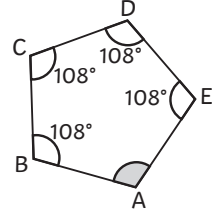
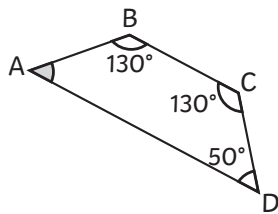
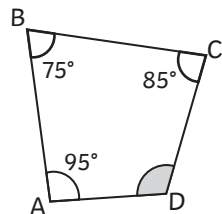
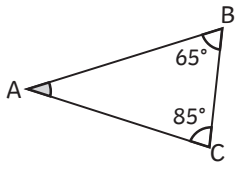
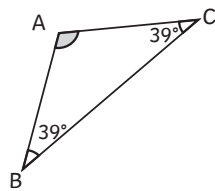
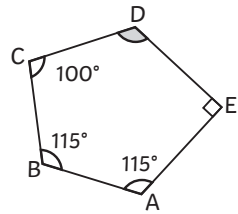
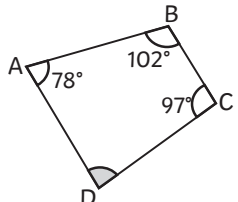
<p>Activity 3.3 Using and Applying</p>	<p>1. 75 and 27</p> <p>Encourage the children to substitute the given number of 45 into both sides of the ratio to find the two possible numbers. E.g. If the 45 is on the left of the ratio, find the value of one part by dividing 45 by 3 (15). The number on the right will be 15 multiplied by 5 which equals 75. If the 45 is on the right of the ratio, find the value of one part by dividing 45 by 5 (9). The number on the left will be 9 multiplied by 3 which equals 27.</p> <p>2. 100 carrots</p> <p>Using the ratio 2:5, encourage the children to see that there are 7 parts in total. 140 divided by 7 equals 20, which gives the value of one part. The actual ratio is 40:100.</p> <p>3. 6cm</p> <p>Encourage the children to identify that the enlargement of 25km to 150km is a scale factor of 6. This means that the distance will be 6cm on the map.</p>
<p>Assess and Review 3.4</p>	<p>Identify that the child has incorrectly identified 400g as $\frac{1}{4}$ of 1kg. Encourage the children to find 100g of the cost of the grapes by dividing £4.00 by 10 and then multiplying this by 4 to find the answer. The correct answer is £1.60.</p>

<p>Activity 4.1 Talk Maths</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>  <p>308°</p> </td> <td>  <p>214°</p> </td> <td>  <p>275°</p> </td> <td>  <p>100°</p> </td> </tr> <tr style="background-color: #e0e0e0;"> <td colspan="4">How many degrees of each cake have the superheroes taken?</td> </tr> <tr> <td>52°</td> <td>146°</td> <td>85°</td> <td>260°</td> </tr> <tr style="background-color: #e0e0e0;"> <td colspan="4">Extra Challenge</td> </tr> <tr> <td>308° - 90° = 218°</td> <td>214° - 90° = 124°</td> <td>275° - 90° = 185</td> <td>100° - 90° = 10°</td> </tr> </table>				 <p>308°</p>	 <p>214°</p>	 <p>275°</p>	 <p>100°</p>	How many degrees of each cake have the superheroes taken?				52°	146°	85°	260°	Extra Challenge				308° - 90° = 218°	214° - 90° = 124°	275° - 90° = 185	100° - 90° = 10°
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While playing the game, encourage the children to talk about their calculations, ensuring they are confident in their understanding that the angles in a triangle total 180° , the angles in a quadrilateral total 360° and the angles in a pentagon total 540° .

Activity 4.2 Key Skills

		
B = 65°	D = 120°	A = 108°
		
A = 50°	D = 105°	A = 30°
		
A = 102°	D = 120°	D = 83°

Activity 4.3 Using and Applying

1.	Angle 1	Angle 2	Angle 3	
Isosceles Triangle	130°	25°	25°	
Scalene Triangle	70°	95°	15°	
	Angle 1	Angle 2	Angle 3	Angle 4
Parallelogram	115°	65°	115°	65°
Isosceles Trapezium	85°	95°	85°	95°

2. Angle d = 15°

Assess and Review 4.4

Encourage the children to notice that the child answering the question has only subtracted one angle from 360° . To correctly calculate angle p, they need to first subtract 53 multiplied by 2 from 360° and then divide this answer by 2. The correct answer is **127°** .

Survival Activity Booklet 5 Answers

Activity 5.1 Talk Maths				
	Perimeter: 24cm	Perimeter: 16cm	Perimeter: 16cm	Perimeter: 22cm
	Area: 35cm^2	Area: 10cm^2	Area: 16cm^2	Area: 10cm^2
	Perimeter: 16cm	Perimeter: 16cm	Perimeter: 14cm	Perimeter: 36cm
	Area: 15cm^2	Area: 9cm^2	Area: 6cm^2	Area: 80cm^2
<p>The four flags with the same perimeter are number 2, 3, 5 and 6. The two flags with the same area are number 2 and 4.</p>				
Activity 5.2 Key Skills	<p>The dominoes should make a loop as:</p>			
		60cm^3		27cm^3
		32cm^3		36cm^3
		80cm^3		20cm^3
		18cm^3		30cm^3
		6cm^3		6cm^3
Activity 5.3 Using and Applying	<p>1. Encourage the children to use the formula length \times width \times height to calculate the volume of the cuboid as 40cm^3.</p>			
	 <input type="checkbox"/>	 <input type="checkbox"/>	 <input checked="" type="checkbox"/>	
<p>2. The area of square tile equals 64cm^2 and the area of rectangular tile equals 60cm^2. Therefore, the difference in area is 4cm^2.</p>				
Assess and Review 5.4	<p>Encourage the children to notice that the child answering the question has only found the total of the lengths given. There is also a length of 1cm and 14cm to find the perimeter. The correct answer is 46cm.</p>			