'Greater Depth' Pack 4 **Answers**

Activity 1.1 Talk Maths	The possible combinations of negative and positive numbers are: **-28 to 13 = 41** **-28 to 55 = 83** **-28 to 24 = 52** **-28 to 32 = 60** **-28 to 46 = 74** (-28 + 41 = 13; (-28 + 83 = 55; (-28 + 52 = 24; (-28 + 60 = 32; (-28 + 74 = 46; 13 - 41 = -28) 55 - 83 = -28) 24 - 52 = -28) 32 - 60 = -28) 46 - 74 = -28) **-44 to 13 = 57** **-44 to 55 = 99** **-44 to 24 = 68** **-44 to 32 = 76** **-44 to 46 = 90** (-44 + 57 = 13; (-44 + 99 = 55; (-44 + 68 = 24; (-44 + 76 = 32; (-44 + 90 = 46; 13 - 57 = -44) 55 - 99 = -44) 24 - 68 = -44) 32 - 76 = -44) 46 - 90 = -44) **-36 to 13 = 49** **-36 to 55 = 91** **-36 to 24 = 60** **-36 to 32 = 68** **-36 to 46 = 82** (-36 + 49 = 13; (-36 + 91 = 55; (-36 + 60 = 24; (-36 + 68 = 32; (-36 + 82 = 46; 13 - 49 = -36) 55 - 91 = -36) 24 - 60 = -36) 32 - 68 = -36) 46 - 82 = -36) **-19 to 13 = 32** **-19 to 55 = 74** **-19 to 24 = 43** **-19 to 32 = 51** **-19 to 46 = 65** (-19 + 32 = 13; (-19 + 74 = 55; (-19 + 43 = 24; (-19 + 51 = 32; (-19 + 65 = 46; 13 - 32 = -19) 55 - 74 = -19) 24 - 43 = -19) 32 - 51 = -19) 46 - 65 = -19) **-57 to 13 = 70** **-57 to 55 = 112** **-57 to 24 = 81** **-57 to 32 = 89** **-57 to 46 = 103** (-57 + 70 = 13; (-57 + 112 = 55; (-57 + 81 = 24; (-57 + 89 = 32; (-57 + 103 = 46; 13 - 70 = -57) 55 - 112 = -57) 24 - 81 = -57) 32 - 89 = -57) 46 - 103 = -57)
Activity 1.2 Guided Maths	1. The missing numbers are -45 and 29. 2. The numbers in the number sequence are increasing by 12 each time so the missing numbers in the sequence are -11, 1, 13, 25 and 37. 3. The difference in temperature between 8 a.m. and 10 a.m. on the bar chart is 6°C.
Activity 1.3 Independent Maths	1. The missing numbers are -60 and 26. 2. The numbers in the number sequence are increasing by 15 each time so the missing numbers in the sequence are -16, -1, 14, 29 and 44. 3. The difference in temperature between 10:00 and 12:00 on the bar chart is 4°C.
Assess and Review 1.4	Encourage the children to notice that the child answering the question has circled the numbers -23 and -6 which have a difference of 17. The correct answer is that the numbers -21 and -3 have a difference of 18.

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Activity 2.1 Talk Maths	$264 ÷ 24 = 11$	$34 × 11 = 374$	$374 × 264 = 98,736$

Activity 2.2 Guided Maths	1. $250.8 ÷ 4 = 62.7$ $58.7 - 4.7 = 58$ $58 × 6 = 348$ 2. £20 - £3.27 = £16.73 £16.73 ÷ 7 = £2.39
Activity 2.3 Independent Maths	1. $346.5 ÷ 5 = 69.3$ $69.3 - 6.3 = 63$ $63 × 8 = 504$ 2. £20 - £8.78 = £11.22 £11.22 ÷ 6 = £1.87
Assess and Review 2.4	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 463 marbles.

Activity 3.1 Talk Maths	The matching superheroes and badges are: 22% of 150 = 33, 7% of 120 = 8.4, 52% of 142 = 73.84, 75% of 156 = 117, 81% of 200 = 162
Activity 3.2 Guided Maths	1. Any 21 parts of the grid should be shaded to show 35% of 60. 2. There is a 15% difference between 18% and 33%. 15% of 300 = 45 45 more children travelled by aeroplane than car. 3. 25% of 145 is 36.25 people and you can't count a quarter of a person.
Activity 3.3 Independent Maths	1. Any 26 parts of the grid should be shaded to show 65% of 40. 2. There is a 38% difference between 23% and 61%. 38% of 500 = 190 190 more children travelled by aeroplane than car. 3. 30% of 149 is 44.7 people which isn't a discrete number of people as you can't count 0.7 of a person.

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Assess and Review 3.4	Encourage the children to notice that the child answering the question hasn't compared the two pieces of information correctly. 75% of 120 is 90. If Hassan scored 91, this means that he scored more than 75% (he scored 75.8%).

Activity 4.1 Talk Maths	1. Alex finished the flying sprint in third place. 2. Ugo finished in second place in the 25 mile flying race. 3. Rosie finished 12 tenths of a second ahead of Andy in the flying sprint. 4. The time difference between Ellie's times in the 25 mile flying race and the endurance race is 88 minutes and 3 seconds (1 hour 28 minutes and 3 seconds).
Activity 4.2 Guided Maths	1. There are 7,200 minutes in five days. 2. Aneesha took 49 minutes and 45 seconds to complete the sponsored run. 3. The film finished at 21:05.
Activity 4.3 Independent Maths	1. There are 259,200 seconds in three days. 2. Aneesha took 1 hour, 3 minutes and 13 seconds to complete the sponsored run. 3. The film finished at 23:06.
Assess and Review 4.4	Encourage the children to notice that the child answering the question has incorrectly converted 3 hours and 3 minutes into minutes only. The correct answer to the problem is 183 minutes.

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Activity 5.1 Talk Maths	8 sapphires were recovered. **Correct** The number of sapphires recovered is equal to the total number of rubies and diamonds. **Correct** 4 rubies were recovered. **Incorrect** 50% of the gemstones recovered were emeralds. **Correct** The number of rubies recovered is equal to the number of sapphires recovered. **Incorrect** 24 emeralds and sapphires were recovered in total. **Correct**

Activity 5.2 Guided Maths	1. a) $\frac{15}{90}$ = $\frac{1}{6}$ of the dice rolls are a number three.
	
	   b) $\frac{18}{90}$ = $\frac{1}{5}$ of the dice rolls are a number five or six.
	
	2. a) 32 dice rolls were a number four.
	   b) 104 dice rolls were a number 1, 2 or 3.

Activity 5.3 Independent Maths	1. a) $\frac{16}{120}$ = $\frac{2}{15}$ of the dice rolls are a number five.
	
	   b) $\frac{50}{120}$ = $\frac{5}{12}$ of the dice rolls are a number one or two.
	
	2. a) 105 dice rolls were a number four.
	   b) 280 dice rolls were a number 1, 2 or 3.

Assess and Review 5.4	Encourage the children to notice that the child answering the question has correctly compared the fractions but has not looked at the total number each pie chart represents. In class 1, $\frac{1}{4}$ of the 24 votes shows that 6 children prefer sandwiches. In class 2, $\frac{1}{5}$ of the 30 votes shows that 6 children prefer sandwiches. Therefore, Hari's statement is correct.