11+ Practice Test Answers
11+ Maths Test 25

Question	Answer	Explanation	Marks
1	Parallelogram	The polygon described has the following properties: 1. One pair of equal angles that are less than 90 degrees (acute angles). 2. One pair of equal angles that are greater than 90 degrees (obtuse angles). 3. Two pairs of sides that are equal in length and parallel to each other. A parallelogram is a quadrilateral with opposite sides parallel and equal in length. The angles of a parallelogram are arranged such that opposite angles are equal, and adjacent angles are supplementary (they add up to 180 degrees). Therefore, the polygon described is a parallelogram, as it satisfies all the properties of a parallelogram.	1
2	9 minutes	To find how much faster Oliver baked his cake, we need to calculate the total time each person spent baking and then find the difference. Amelia started at 14:20 and finished at 15:45. To calculate the time she spent baking: 15:45 - 14:20 = 1 hour and 25 minutes, which is 85 minutes in total. Oliver started at 14:12 and finished at 15:28. To calculate the time he spent baking: 15:28 - 14:12 = 1 hour and 16 minutes, which is 76 minutes in total. To find the difference in their baking times: 85 minutes (Amelia's time) - 76 minutes (Oliver's time) = 9 minutes Therefore, Oliver baked his cake 9 minutes faster than Amelia.	1
3	33 578 km	To find the total distance the train has travelled, we need to first calculate the distance between London and Birmingham and then multiply it by the number of trips. The distance between London and Manchester is 335.78 km, and the distance between London and Birmingham is one-fifth of that. 335.78 km ÷ 5 = 67.156 km So, the distance between London and Birmingham is 67.156 km. The train has made 500 trips between London and Birmingham, so we multiply the distance by 500: 67.156 km × 500 = 33,578 km Therefore, the total distance the train has travelled between London and Birmingham is 33,578 km.	1

4	3.3 kilometres	To find out how far James needs to run on the third day, we need to subtract the distances he ran on the first and second days from his total goal of 10 kilometres. First day: 2.5 kilometres Second day: 4.2 kilometres Total distance run so far: 2.5 + 4.2 = 6.7 kilometres Now, we subtract the total distance run so far from the goal: 10 - 6.7 = 3.3 kilometres Therefore, James needs to run 3.3 kilometres on the third day to reach his goal of 10 kilometres.	1
5	2.7 litres	Amelia starts with 4.2 litres of orange juice. She pours 300 ml into each of the five glasses. To find the total amount poured, we multiply: 300 ml × 5 = 1 500 ml 1 500 ml is equal to 1.5 litres. To find the amount of orange juice left in the bottle, we subtract: 4.2 litres - 1.5 litres = 2.7 litres Therefore, there are 2.7 litres of orange juice left in the bottle.	1
6	360	To calculate the population after 2 years, we need to increase the initial population by 20% each year. Year 1: 250 × 1.2 = 300 Year 2: 300 × 1.2 = 360 Therefore, after 2 years, the population of the village would be 360 people.	1
7	210 minutes	To find the number of minutes between 10:30 and 14:00, we need to calculate the time difference. From 10:30 to 11:00, there are 30 minutes. From 11:00 to 14:00, there are 3 hours, which is equal to 180 minutes (3 × 60 = 180). Therefore, the total time difference is 30 + 180 = 210 minutes.	1
8	15	To solve this problem, we need to determine how many 24° angles fit together to make a full circle (360°). We can calculate this by dividing 360° by 24°: 360° ÷ 24° = 15 Therefore, Samantha needs 15 chocolate pieces to cover the entire edge of the circular cake, with each piece covering a 24° angle.	1

| 9 | 8 weeks | To calculate how many weeks it will take Liam to save up enough money, we need to find the difference between the cost of the bicycle and his current savings, then divide that difference by his weekly earnings.

Cost of the bicycle: £420
Liam's current savings: £180
Difference: £420 - £180 = £240

Liam earns £30 per week, so we divide the difference by his weekly earnings: £240 ÷ £30 = 8 weeks

Therefore, it will take Liam 8 weeks to save up enough money to buy the bicycle. | 1 |
| 10 | 3 cm | Let the length of one side of the prism's base be x cm.

The surface area of a rectangular prism is given by the formula: 2(lw + lh + wh), where l is length, w is width, and h is height.

Given that the length and width are equal (x cm) and the height is 2 cm, we can substitute these values into the formula:

$94 = 2(x \cdot x + x \cdot 2 + x \cdot 2)$

$94 = 2(x^2 + 2x + 2x)$

$94 = 2(x^2 + 4x)$

$47 = x^2 + 4x$

$0 = x^2 + 4x - 47$

Using the quadratic formula, we find that x = 3 or x = -7. Since length cannot be negative, x must be 3.

Therefore, the length of one side of the prism's base is 3 cm. | 1 |