11+ Practice Test Answers

11+ Maths Test 51

Question	Answer	Explanation	Marks
1	1.2 m	To find the total height of the tower, we need to multiply the number of blocks by the height of each block. Number of blocks = 8 Height of each block = 15 cm Total height = 8 × 15 cm = 120 cm To convert centimetres to metres, we divide by 100: 120 cm ÷ 100 = 1.2 m Therefore, the total height of the tower when Sarah stacks all 8 blocks on top of each other will be 1.2 metres.	1
2	0.25 miles	Amelia swims 5 laps of the pool every day. Each lap is approximately 0.05 miles long. To calculate the total distance Amelia swims each day, we need to multiply the number of laps by the distance of each lap: 5 × 0.05 miles = 0.25 miles Therefore, Amelia swims 0.25 miles each day.	1
3	83	To find out how many more sandwiches Sarah needs to prepare, we need to subtract the number of sandwiches she has already made from the total number of sandwiches required. Total sandwiches needed: 150 Sandwiches already made: 67 150 - 67 = 83 Therefore, Sarah needs to prepare 83 more sandwiches for the charity fundraiser.	1
4	6 pints	To find the approximate number of pints, we need to multiply the number of litres by the conversion factor. 3.6 litres × 1.75 pints/litre = 6.3 pints Rounding 6.3 to the nearest whole number gives us 6 pints. Therefore, the best approximation for the amount of lemon juice Amelia has used is 6 pints.	1
5	£32	To find the amount saved, we need to calculate 40% of £80. We can do this by multiplying £80 by 40/100 (or 0.4): 80 × 0.4 = £32. Therefore, you would save £32 by buying the jumper in the sale.	1

6	800	To find the total number of benches, we first need to calculate the total area of both playgrounds: Area of one playground = 80 m × 60 m = 4,800 m^2 Total area of both playgrounds = 4,800 m^2 × 2 = 9,600 m^2 Now, we know that there is one bench for every 12 m^2 of space. To find the total number of benches, we divide the total area by the area per bench: Number of benches = 9,600 m^2 ÷ 12 m^2 per bench = 800 benches Therefore, there are 800 benches in total across both playgrounds.	**1**
7	(-7, 8)	The original rectangle has vertices at (2, 1), (2, 5), (7, 1), and (7, 5). The top-right vertex is at (7, 5). When the rectangle is reflected across the y-axis, the x-coordinates change sign. The new vertices are at (-2, 1), (-2, 5), (-7, 1), and (-7, 5). The top-right vertex is now at (-7, 5). When the rectangle is then shifted up by 3 units, the y-coordinates increase by 3. The final vertices are at (-2, 4), (-2, 8), (-7, 4), and (-7, 8). The top-right vertex is now at (-7, 8). Therefore, the new coordinates of the top-right vertex after the reflection and translation are (-7, 8).	**1**
8	Charlie scored 5 goals, David scored 1 goal.	To solve this problem, we need to substitute the given values into the equation and check which pair of numbers satisfies it. Let's start with the first option: Charlie scored 5 goals ($C = 5$) and David scored 1 goal ($D = 1$). Substituting these values into the equation: $3C + 2D = 17$ $3(5) + 2(1) = 17$ $15 + 2 = 17$ $17 = 17$ Therefore, the first option is correct. Checking the other options: Option 2: $3(4) + 2(3) = 12 + 6 = 18$ (incorrect) Option 3: $3(3) + 2(4) = 9 + 8 = 17$ (incorrect) Option 4: $3(6) + 2(2) = 18 + 4 = 22$ (incorrect) In conclusion, the only pair of values that satisfies the equation $3C + 2D = 17$ is Charlie scoring 5 goals and David scoring 1 goal.	**1**
9	15,000 mm^2	To find the area of the photograph in square millimetres, we need to convert the dimensions from centimetres to millimetres and then multiply the width by the height. Width: 15 cm = 15 × 10 = 150 mm Height: 10 cm = 10 × 10 = 100 mm Area = Width × Height Area = 150 mm × 100 mm = 15,000 mm^2 Therefore, the area of the photograph is 15,000 square millimetres (mm^2).	**1**

10	10	To calculate the minimum number of kilometres Sarah needs to run each day, we need to divide the total distance by the number of days: Total distance = 500 km Number of days = 50 Minimum daily distance = 500 km ÷ 50 = 10 km Therefore, Sarah needs to run a minimum of 10 kilometres each day to reach her goal of running 500 kilometres in 50 days.	**1**