

11+ Practice Test Answers

11+ Maths Test 5

Question	Answer	Explanation	Marks
1	Square-based pyramid	<p>A square-based pyramid is the correct answer because it has exactly 5 vertices.</p> <p>A vertex is a point where three or more edges meet. In a square-based pyramid, there are four vertices at the base (one at each corner of the square) and one vertex at the apex, making a total of 5 vertices.</p> <p>A triangular prism has 6 vertices (three at each end), a cube has 8 vertices (one at each corner), and an octahedron has 6 vertices. Therefore, the square-based pyramid is the only shape among the given options that has exactly 5 vertices.</p>	1
2	5.42 kg and 7.18 kg	<p>To find the difference between two numbers, we subtract the smaller number from the larger number.</p> <p>5.42 kg and 7.18 kg: $7.18 - 5.42 = 1.76$ kg</p> <p>2.89 kg and 4.64 kg: $4.64 - 2.89 = 1.75$ kg (incorrect)</p> <p>1.56 kg and 3.31 kg: $3.31 - 1.56 = 1.75$ kg (incorrect)</p> <p>6.73 kg and 8.48 kg: $8.48 - 6.73 = 1.75$ kg (incorrect)</p> <p>Therefore, the pair of weights with a difference greater than 1.75 kg is 5.42 kg and 7.18 kg.</p>	1
3	20	<p>To find the average (mean) number of minutes each pupil stayed silent for, we need to divide the total number of minutes by the number of pupils.</p> <p>There are 25 pupils in Mrs Johnson's Year 6 class, and they stayed silent for a total of 500 minutes.</p> <p>$500 \div 25 = 20$</p> <p>Therefore, on average, each pupil stayed silent for 20 minutes during the sponsored silence.</p>	1
4	£15.71	<p>To calculate the average (mean) amount Samantha earns per day, we need to:</p> <ol style="list-style-type: none"> 1. Calculate her total earnings for the week 2. Divide the total by the number of days in the week <p>Weekday earnings: $\text{£}10 \times 5 \text{ days} = \text{£}50$</p> <p>Weekend earnings: $\text{£}10 \times 3 \times 2 \text{ days} = \text{£}60$</p> <p>Total earnings: $\text{£}50 + \text{£}60 = \text{£}110$</p> <p>Average daily earnings: $\text{£}110 \div 7 \text{ days} = \text{£}15.71$ (rounded to the nearest penny)</p>	1

5	5c	<p>Let's break this down step by step:</p> <p>The 09:15 train has 3 carriages, and each carriage has a capacity of c passengers. So, the total passenger capacity of the 09:15 train is $3 \times c = 3c$.</p> <p>The 11:30 train has 2 more carriages than the 09:15 train. Since the 09:15 train has 3 carriages, the 11:30 train has $3 + 2 = 5$ carriages.</p> <p>Each carriage still has a capacity of c passengers. So, the total passenger capacity of the 11:30 train is $5 \times c = 5c$.</p> <p>Therefore, the correct answer is $5c$.</p>	1
6	7	<p>To find the number of classes, we need to divide the total number of pupils by the mean number of pupils per class.</p> <p>Total number of pupils = 224 Mean number of pupils per class = 32</p> <p>Number of classes = $224 \div 32 = 7$</p> <p>Therefore, there are 7 classes in the school.</p>	1
7	9 000 cm ²	<p>To find the total surface area of the rectangular fish tank, we need to calculate the area of each face and then add them together.</p> <p>The tank has 5 faces: 2 rectangles with dimensions 60 cm \times 40 cm (front and back), 2 rectangles with dimensions 30 cm \times 40 cm (sides), and 1 rectangle with dimensions 60 cm \times 30 cm (only the bottom, it doesn't need a top!).</p> <p>Area of front and back: $2 \times (60 \text{ cm} \times 40 \text{ cm}) = 2 \times 2\,400 \text{ cm}^2 = 4\,800 \text{ cm}^2$</p> <p>Area of sides: $2 \times (30 \text{ cm} \times 40 \text{ cm}) = 2 \times 1\,200 \text{ cm}^2 = 2\,400 \text{ cm}^2$</p> <p>Area of the bottom: $(60 \text{ cm} \times 30 \text{ cm}) = 1\,800 \text{ cm}^2$</p> <p>Total surface area = $4\,800 \text{ cm}^2 + 2\,400 \text{ cm}^2 + 1\,800 \text{ cm}^2 = 9\,000 \text{ cm}^2$</p> <p>Therefore, Amir needs 9 000 cm² of glass to construct the fish tank.</p>	1
8	135°	<p>An obtuse angle is an angle that measures greater than 90° but less than 180°.</p> <p>Among the given options, only 135° falls within this range, making it the correct answer.</p> <p>45° and 60° are acute angles, as they measure less than 90°, while 90° is a right angle.</p>	1
9	1 153	<p>To find the total number of stickers Amelia collected, we need to add the number of stickers she got each day:</p> <p>Monday: 523 stickers Tuesday: 341 stickers Wednesday: 289 stickers</p> <p>$523 + 341 + 289 = 1\,153$</p> <p>Therefore, Amelia collected a total of 1 153 stickers over the three days.</p>	1

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Irregular
pentagon

The fence will be an irregular pentagon because:

1. It has five sides (penta- means five)
2. The lengths of the sides are not all equal (3m, 5m, 3m, 4m, 5m), so it is not a regular shape

Therefore, the finished fence will be an irregular five-sided shape, which is called an irregular pentagon.

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