11+ Practice Test Answers

11+ Maths Test 15

Question	Answer	Explanation	Marks
1	135°	An obtuse angle is an angle that measures greater than 90° but less than 180°. Among the given options, only 135° falls within this range, making it the correct answer. 45° and 60° are acute angles, as they measure less than 90°, while 90° is a right angle.	1
2	12	To find the number of batches Oliver can make, we need to divide the total amount of flour he needs by the amount required per batch. 3 kg = 3,000 g (since 1 kg = 1,000 g) 3,000 g ÷ 250 g per batch = 12 batches Therefore, Oliver can make 12 batches of chocolate chip cookies with 3 kg of flour.	1
3	11	To find Noah's age, let's use the given information: - The mean age of the three brothers is 12 years old. - Liam is 5 years older than Noah, so Liam's age = Noah's age + 5 - Oliver is 2 years younger than Noah, so Oliver's age = Noah's age - 2 The mean age is calculated by adding all the ages and dividing by the number of people. In this case: (Liam's age + Noah's age + Oliver's age) ÷ 3 = 12 Substituting the expressions for Liam and Oliver's ages: ((Noah's age + 5) + Noah's age + (Noah's age - 2)) ÷ 3 = 12 Simplifying: (3 × Noah's age + 3) ÷ 3 = 12 3 × Noah's age + 3 = 36 3 × Noah's age = 33 Noah's age = 33 ÷ 3 Noah's age = 11 Therefore, Noah is 11 years old.	1

4	13:10	To determine when Liam should start baking, we need to work backwards from the party start time and subtract the time required for each step. Party start time: 14:30 Decorating time: 20 minutes Cooling time: 15 minutes Baking time: 45 minutes Step 1: Subtract decorating time from party start time 14:30 - 20 minutes = 14:10 Step 2: Subtract cooling time from the result of Step 1 14:10 - 15 minutes = 13:55 Step 3: Subtract baking time from the result of Step 2 13:55 - 45 minutes = 13:10 Therefore, Liam should start baking the cake at 13:10 to have it ready in time for the party at 14:30.	**1**
5	12.50h + (p ÷ 4)	To calculate the gardener's pay, we need to consider two components: their hourly rate and the bonus they receive for planting plants. The gardener's hourly pay is calculated by multiplying their hourly rate (£12.50) by the number of hours worked (h). This can be expressed as $12.50h$. The bonus is calculated as 25% of the cost of the plants planted. To find 25% of the plant cost (p), we divide p by 4. This can be expressed as $(p \div 4)$. To find the total pay, we add the hourly pay and the bonus together. Therefore, the correct expression is $12.50h + (p \div 4)$.	**1**
6	8	To determine the number of 250g packets of butter Amelia needs, we must convert 2kg to grams and then divide by 250g. 2kg = 2 × 1000g = 2000g 2000g ÷ 250g = 8 Therefore, Amelia should purchase 8 packets of 250g butter to have enough for her large batch of chocolate chip cookies.	**1**
7	0.45 kg	To find the total weight of the dry ingredients, we need to add the weight of the flour and sugar together. First, let's convert the weight of the sugar from grams to kilograms: 150 g = 0.15 kg (since 1 000 g = 1 kg) Now, we can add the weights together: 0.3 kg (flour) + 0.15 kg (sugar) = 0.45 kg Therefore, the total weight of the dry ingredients Olivia needs for the cake is 0.45 kg.	**1**
8	Rectangular prism	The shape described in the question is a rectangular prism, also known as a cuboid. A rectangular prism has 6 faces, 8 vertices, and 12 edges. The faces are made up of three pairs of identical rectangles, with each pair being parallel to each other. In this case, two of the faces are squares, which are a special type of rectangle with all sides equal in length. The other four faces are identical rectangles. Therefore, the shape that fits the given description is a rectangular prism.	**1**

9	0 ml	To find out how much orange juice is left, we need to: 1. Calculate how many glasses Rajesh can fill with 7 500 ml of juice, using 250 ml per glass. 2. Multiply the number of glasses by 250 ml to find the total amount of juice used. 3. Subtract the total amount of juice used from the original 7 500 ml. Step 1: 7 500 ÷ 250 = 30 glasses Step 2: 30 × 250 = 7 500 ml of juice used Step 3: 7 500 - 7 500 = 0 ml of juice left Therefore, there is no orange juice left in the container after filling 30 glasses.	1
10	13.42	To solve for x, we need to isolate the variable on one side of the equation. First, let's simplify the right side of the equation by adding 6.3 and 19.82: 6.3 + 19.82 = 26.12 Now, the equation looks like this: 12.7 + x = 26.12 To isolate x, we need to subtract 12.7 from both sides of the equation: 12.7 + x - 12.7 = 26.12 - 12.7 x = 13.42 Therefore, the correct answer is 13.42.	1