

11+ Practice Test Answers

11+ Maths Test 36

Question	Answer	Explanation	Marks
1	£18.45	<p>To find out how much money Tom has in his piggy bank now, we need to:</p> <ol style="list-style-type: none">1. Calculate how much money he took out: $£7.25 + £3.80 = £11.05$2. Subtract the amount he took out from his initial amount: $£24.50 - £11.05 = £13.45$3. Add the gift money from his grandma: $£13.45 + £5.00 = £18.45$ <p>Therefore, Tom now has £18.45 in his piggy bank.</p>	1
2	45°	<p>An acute angle is an angle that measures less than 90°.</p> <p>Since angle x is described as an acute angle, it must be smaller than 90°.</p> <p>Among the given options, only 45° is an acute angle, as it is less than 90°.</p> <p>Therefore, the correct answer is 45°.</p>	1
3	40 km	<p>Let's solve this step by step:</p> <p>Step 1: Calculate how far Amir drove in the first two hours</p> <ul style="list-style-type: none">• Speed = 100 kilometers per hour• Time = 2 hours• Distance = Speed \times Time = $100 \times 2 = 200$ kilometers <p>Step 2: Calculate the additional distance before hitting traffic</p> <ul style="list-style-type: none">• Speed = 100 kilometers per hour• Time = 45 minutes = 0.75 hours• Distance = Speed \times Time = $100 \times 0.75 = 75$ kilometers <p>Step 3: Calculate total distance covered</p> <ul style="list-style-type: none">• Total distance covered = First journey + Second journey• Total distance covered = $200 + 75 = 275$ kilometers <p>Step 4: Calculate remaining distance</p> <ul style="list-style-type: none">• Full journey length = 320 kilometers• Distance already covered = 275 kilometers• Remaining distance = $320 - 275 = 45$ kilometers <p>Therefore, Amir has 45 kilometers left to drive at the reduced speed of 40 kilometers per hour.</p>	1
4	Square	<p>A square is a quadrilateral that must have four equal angles, each measuring 90 degrees.</p> <p>This is because a square is defined as a regular quadrilateral, meaning all its sides are equal in length and all its angles are equal in measure.</p> <p>The other quadrilaterals mentioned (kite, trapezium, and rhomboid) can have varying angle measures and do not necessarily have four equal angles.</p> <p>Therefore, the only quadrilateral listed that must have four equal angles is a square.</p>	1

5	20°C	<p>To calculate the mean temperature, we need to add up all the recorded temperatures and divide the sum by the number of days.</p> <p>Sum of temperatures: $18^{\circ}\text{C} + 20^{\circ}\text{C} + 17^{\circ}\text{C} + 22^{\circ}\text{C} + 19^{\circ}\text{C} + 24^{\circ}\text{C} = 120^{\circ}\text{C}$</p> <p>Number of days: 6</p> <p>Mean temperature = $120^{\circ}\text{C} \div 6 = 20^{\circ}\text{C}$</p> <p>Therefore, the mean temperature for these 6 days is 20°C.</p>	1
6	180 cm	<p>To find the second longest ribbon, we need to convert all the lengths to the same unit. Let's convert them all to metres (m).</p> <p>2.5 m = 2.5 m</p> <p>180 cm = 1.8 m (because 100 cm = 1 m)</p> <p>0.9 m = 0.9 m</p> <p>1 200 mm = 1.2 m (because 1 000 mm = 1 m)</p> <p>0.4 m = 0.4 m</p> <p>Now, ordering from longest to shortest:</p> <p>$2.5\text{ m} > 1.8\text{ m} > 1.2\text{ m} > 0.9\text{ m} > 0.4\text{ m}$</p> <p>Therefore, the second longest ribbon is 1.8 m, which was originally given as 180 cm.</p>	1
7	£49.68	<p>As the bakery sells cupcakes in packs of 8, the school needs to buy enough whole packs to cover 66 cupcakes. Dividing 66 by 8 gives us 8 remainder 2, which means they need to round up to 9 packs to have enough cupcakes. Therefore, the cost would be $9 \times \text{£}5.52 = \text{£}49.68$.</p>	1
8	30 cm	<p>To find the length of the fish tank, we need to use the formula for the volume of a rectangular prism:</p> <p>Volume = width \times depth \times length</p> <p>We know the volume is $96,000\text{ cm}^3$, the width is 80 cm, and the depth is 40 cm. Let's substitute these values into the formula:</p> <p>$96,000\text{ cm}^3 = 80\text{ cm} \times 40\text{ cm} \times \text{length}$</p> <p>$96,000\text{ cm}^3 = 3,200\text{ cm}^2 \times \text{length}$</p> <p>To find the length, we divide both sides by $3,200\text{ cm}^2$:</p> <p>$\text{length} = 96,000\text{ cm}^3 \div 3,200\text{ cm}^2$</p> <p>$\text{length} = 30\text{ cm}$</p> <p>Therefore, the length of the fish tank is 30 cm.</p>	1
9	16	<p>To find out how many pancakes Liam can make, we need to divide the total amount of batter by the amount used for each pancake.</p> <p>Total batter: 2.4 kg = 2,400 g</p> <p>Batter used for each pancake: 150 g</p> <p>Number of pancakes = $2,400\text{ g} \div 150\text{ g} = 16$</p> <p>Therefore, Liam will be able to make 16 pancakes with the 2.4 kg of batter.</p>	1

10

40 g

Liam has 2.4 kg of modelling clay, which is equal to 2,400 g ($2.4 \times 1,000 = 2,400$).

He uses 80 g of clay for each small sculpture.

To find out how many sculptures he can make, we divide the total amount of clay by the amount used for each sculpture:

$$2,400 \div 80 = 30$$

So, Liam can make 30 small sculptures.

To calculate the amount of clay left over, we multiply the number of sculptures by the amount of clay used for each one, and then subtract that from the total amount of clay:

$$2,400 - (30 \times 80) = 2,400 - 2,360 = 40$$

Therefore, Liam will have 40 g of clay left over.

1