

11+ Practice Test Answers

11+ Maths Test 29

Question	Answer	Explanation	Marks
1	20.25 ounces	<p>To solve this problem, we need to set up a proportion based on the given recipe:</p> <p>12 ounces of flour : 16 ounces of chocolate chips = x ounces of flour : 27 ounces of chocolate chips</p> <p>Cross multiply to solve for x:</p> $12 \times 27 = 16x$ $324 = 16x$ $x = 324 \div 16$ $x = 20.25$ <p>Therefore, Sarah needs 20.25 ounces of flour to make the chocolate chip cookies with 27 ounces of chocolate chips.</p>	1
2	334	<p>To find the number of complete groups when 1 670 students are divided into groups of 5, we need to divide 1 670 by 5.</p> $1\,670 \div 5 = 334$ <p>Therefore, there would be 334 complete groups of 5 students.</p>	1
3	400 cm	<p>To find the width of the fish tank, we need to use the formula for the volume of a rectangular prism:</p> <p>Volume = length \times width \times height</p> <p>We know the volume is 3 000 litres, which is equal to 3 000 000 cm³ (as 1 litre = 1 000 cm³).</p> <p>The length is 150 cm, and the height is 50 cm.</p> <p>Let's substitute these values into the formula:</p> $3\,000\,000\text{ cm}^3 = 150\text{ cm} \times \text{width} \times 50\text{ cm}, \text{ hence } 3\,000\,000\text{ cm}^3 = 7\,500\text{ cm}^2 \times \text{width}$ <p>To solve for the width, we divide both sides by (7 500 cm²):</p> $\text{width} = 3\,000\,000\text{ cm}^3 \div 7\,500\text{ cm}^2$ $\text{width} = 400\text{ cm}$ <p>Therefore, the width of the fish tank is 400 cm.</p>	1

4	10.5t	<p>To find the total cost of buying t tickets, we need to consider both the booking fee and the cost per ticket.</p> <p>The booking fee is a fixed cost of £2.50 per ticket, so for t tickets, the total booking fee would be $2.5 \times t$.</p> <p>The cost per ticket is £8, so for t tickets, the total cost of the tickets would be $8 \times t$.</p> <p>To find the total cost, we add the booking fee and the cost of the tickets:</p> <p>Total cost = Booking fee + Cost of tickets Total cost = $2.5 \times t + 8 \times t$ Total cost = $2.5t + 8t$</p> <p>Simplifying the expression, we get: $10.5t$.</p>	1
5	£5.40	<p>To find the cost of flour for 18 loaves, we first need to calculate the total amount of flour needed.</p> <p>Each loaf requires 250g of flour, so for 18 loaves:</p> <p>$250\text{g} \times 18 = 4,500\text{g}$ or 4.5kg</p> <p>Now, we know that flour costs £1.20 per kilogram. To find the total cost, we multiply the price per kilogram by the number of kilograms needed:</p> <p>$£1.20 \times 4.5 = £5.40$</p> <p>Therefore, the flour for 18 loaves of bread will cost £5.40.</p>	1
6	obtuse	<p>An acute angle is less than 90°.</p> <p>An obtuse angle is greater than 90° but less than 180°.</p> <p>A right angle is exactly 90°.</p> <p>A reflex angle is greater than 180° but less than 360°.</p> <p>Since the angle Sarah measured is 168°, which is greater than 90° but less than 180°, it is classified as an obtuse angle.</p>	1
7	92 cars	<p>To find the number of cars produced in 11.5 hours, we need to calculate the production rate per hour and then multiply it by 11.5.</p> <p>Production rate per hour = $48 \text{ cars} \div 6 \text{ hours} = 8 \text{ cars per hour}$</p> <p>Cars produced in 11.5 hours = $8 \text{ cars per hour} \times 11.5 \text{ hours} = 92 \text{ cars}$</p> <p>Therefore, the factory will produce 92 cars in 11.5 hours if it maintains the same production rate.</p>	1

8	6	1
9	£21.24	1
10	Triangle	1

To find the number of silver stars Liam had, we need to use the given formula and the information provided.

The formula is: $V = 2s + 3g$, where V is the total value of loyalty points, s is the number of silver stars, and g is the number of gold stars.

We know that Liam had 18 gold stars and his loyalty points were worth £66 in total. Let's substitute these values into the formula:

$$66 = 2s + 3(18)$$

$$66 = 2s + 54$$

Now, we can solve for s by subtracting 54 from both sides of the equation:

$$66 - 54 = 2s$$

$$12 = 2s$$

Finally, we divide both sides by 2 to find the value of s :

$$12 \div 2 = s$$

$$6 = s$$

Therefore, Liam had 6 silver stars.

To calculate the profit, we need to subtract the cost of the art supplies from the selling price.

Selling price: £59.99
Cost of supplies: £38.75

Profit = Selling price - Cost
Profit = £59.99 - £38.75
Profit = £21.24

Therefore, Samantha made a profit of £21.24 from selling the art supplies to her friend.

A triangle is a polygon with three sides and three angles.

A rhombus and a trapezium are quadrilaterals, which means they have four sides.

A pentagon is a polygon with five sides.

Therefore, among the given shapes, a triangle has the smallest number of sides.