

11+ Practice Test Answers

11+ Maths Test 21

Question	Answer	Explanation	Marks
1	147	<p>To find out how many more cupcakes Amelia needs to bake, we need to:</p> <p>1. Calculate the total number of cupcakes she has already baked by adding the cupcakes baked on Monday and Tuesday:</p> $85 + 68 = 153 \text{ cupcakes}$ <p>2. Subtract the number of cupcakes she has already baked from the total number of cupcakes required:</p> $300 - 153 = 147 \text{ cupcakes}$ <p>Therefore, Amelia needs to bake 147 more cupcakes to reach the required amount of 300 cupcakes for the school fundraiser.</p>	1
2	20	<p>The bakery produces 120 cupcakes per batch, and Sarah orders three batches.</p> <p>Total number of cupcakes = $120 \times 3 = 360$ cupcakes</p> <p>Sarah distributes the cupcakes equally among 18 children.</p> <p>Number of cupcakes each child receives = $360 \div 18 = 20$ cupcakes</p> <p>Therefore, each child at the birthday party will receive 20 cupcakes.</p>	1
3	384 mol/L	<p>To find the original concentration, we need to multiply the final concentration by the dilution factor.</p> <p>The dilution factor is 10,000, and the final concentration is 0.384 mol/L.</p> <p>Original concentration = Final concentration \times Dilution factor</p> $\text{Original concentration} = 0.384 \text{ mol/L} \times 10,000$ $\text{Original concentration} = 384 \text{ mol/L}$ <p>Therefore, the original concentration of the solution before dilution was 384 mol/L.</p>	1
4	52.81	<p>To solve this problem, we need to follow the order of operations.</p> <p>First, we multiply 5.281 by 100:</p> $5.281 \times 100 = 528.1$ <p>Then, we divide the result by 10:</p> $528.1 \div 10 = 52.81$ <p>Therefore, the final result of these operations is 52.81.</p>	1

5	12	<p>A cube is a three-dimensional shape with six square faces.</p> <p>Each face of a cube is connected to four other faces, forming an edge where they meet.</p> <p>Since a cube has six faces, and each face contributes to four edges, the total number of edges can be calculated as follows:</p> <p>6 faces \times 4 edges per face = 24 edges</p> <p>However, this count includes each edge twice, as each edge is shared by two faces.</p> <p>To find the actual number of edges, we divide the total count by 2:</p> <p>24 edges \div 2 = 12 edges</p> <p>Therefore, a cube has 12 edges in total.</p>	1
6	48	<p>Let's break this down step by step:</p> <ol style="list-style-type: none"> 1. We are told that the number of boys (m) is 12 less than twice the number of girls (g). 2. This can be represented by the equation: $m = 2g - 12$ 3. We are also told that there are 30 girls in the school. So, $g = 30$. 4. Substituting this value into our equation: <p>$m = 2(30) - 12$</p> <p>$m = 60 - 12$</p> <p>$m = 48$</p> <p>Therefore, there are 48 boys in the school.</p>	1
7	£4.80	<p>To find the total amount Liam and Emma spent, we need to calculate their individual expenses and then add them together.</p> <p>Liam's expenses:</p> <p>Notebook: £1.25 Three pens: $3 \times 60p = £1.80$ Liam's total: $£1.25 + £1.80 = £3.05$</p> <p>Emma's expenses:</p> <p>Two pencils: $2 \times 40p = 80p$ Ruler: 95p Emma's total: $80p + 95p = £1.75$</p> <p>Total amount spent by Liam and Emma:</p> <p>$£3.05 + £1.75 = £4.80$</p> <p>Therefore, the correct answer is £4.80.</p>	1

8	× 1.5	<p>The baker originally planned to triple his recipe of 60 cookies, which would be:</p> $60 \times 3 = 180 \text{ cookies}$ <p>However, he only has enough chocolate chips for half of that amount. To calculate half of the tripled amount, he could:</p> $180 \div 2 = 90 \text{ cookies}$ <p>Alternatively, he could apply both operations to the original amount in a single calculation:</p> $60 \times 3 \div 2$ <p>Following the order of operations, multiplication comes before division, so this is equivalent to:</p> $(60 \times 3) \div 2 = 180 \div 2 = 90 \text{ cookies}$ <p>However, the question asks for a single calculation applied to the original recipe amount. We can simplify the above calculation to:</p> $60 \times 1.5 = 90 \text{ cookies}$ <p>Therefore, the baker could multiply his original recipe amount by 1.5 to determine how many cookies he can make with his limited chocolate chips.</p>	1
9	Company B charges a flat rate of £800 for up to 50 students	<p>To determine which coach hire option is the most expensive, we need to calculate the total cost for each company based on the number of students going on the trip.</p> <p>Company A: 40 students × £15 per student = £600</p> <p>Company B: Flat rate of £800 for up to 50 students</p> <p>Company C: (40 students × £12 per student) + £50 booking fee = £530</p> <p>Company D: (40 students × £10 per student) + £100 booking fee = £500</p> <p>Therefore, Company B is the most expensive option at £800.</p>	1
10	£3.75	<p>To find the total cost of buying crisps for Emily's 5 friends, we need to multiply the cost of one packet by the number of friends.</p> <p>Cost of one packet of crisps: £0.75</p> <p>Number of friends: 5</p> <p>Total cost = £0.75 × 5 = £3.75</p> <p>Therefore, it will cost Emily a total of £3.75 to buy crisps for her 5 friends.</p>	1