

11+ Practice Test Answers

11+ Maths Test 44

Question	Answer	Explanation	Marks
1	90°	<p>The sum of the angles in a pentagon is always 540°.</p> <p>To find the measure of the fifth angle, we need to subtract the sum of the known angles from 540°.</p> $100^\circ + 120^\circ + 90^\circ + 140^\circ = 450^\circ$ $540^\circ - 450^\circ = 90^\circ$ <p>Therefore, the measure of the fifth angle is 90°.</p>	1
2	13 600 cm ³	<p>To find the total volume of wood used, we need to calculate the volume of the base and the volume of the four posts, then add them together.</p> <p>Volume of the base: $60 \text{ cm} \times 30 \text{ cm} \times 2 \text{ cm} = 3\,600 \text{ cm}^3$</p> <p>Volume of one post: $5 \text{ cm} \times 5 \text{ cm} \times 100 \text{ cm} = 2\,500 \text{ cm}^3$</p> <p>Volume of four posts: $4 \times 2\,500 \text{ cm}^3 = 10\,000 \text{ cm}^3$</p> <p>Total volume: $3\,600 \text{ cm}^3 + 10\,000 \text{ cm}^3 = 13\,600 \text{ cm}^3$</p> <p>Therefore, the total volume of wood used to construct the planter box is 13 600 cm³.</p>	1
3	47 410	<p>To find the number of boxes filled, we need to divide the total number of cans by the number of cans in each box.</p> $8\,723\,496 \div 184 = 47\,410 \text{ remainder } 56$ <p>Since we can only have whole boxes, the remaining 56 cans will be left over.</p> <p>Therefore, 47 410 boxes were filled with the cans of soup produced by the factory in a year.</p>	1
4	Liam, by 208 jelly beans.	<p>To determine whose estimate was closer, we need to calculate the difference between each person's estimate and the actual number of jelly beans:</p> <p>Olivia's estimate: 2,754 Actual number: 2,981 Difference: $2,981 - 2,754 = 227$</p> <p>Liam's estimate: 3,189 Actual number: 2,981 Difference: $3,189 - 2,981 = 208$</p> <p>Olivia's estimate was off by 227 jelly beans, while Liam's estimate was off by 208 jelly beans. Therefore, Liam's estimate was closer to the actual number of jelly beans in the container.</p> <p>In conclusion, Liam's estimate was closer, and his estimate differed from the actual number by 208 jelly beans.</p>	1

5	<p>£1.30</p> <p>To find the average (mean) price, we need to:</p> <ol style="list-style-type: none"> 1. Add up the prices of all the items 2. Divide the total by the number of items <p>Prices of items:</p> <p>Pen: £1.20</p> <p>Pencil: £0.80</p> <p>Ruler: £1.50</p> <p>Eraser: £0.60</p> <p>Notebook: £2.40</p> <p>Total price = £1.20 + £0.80 + £1.50 + £0.60 + £2.40 = £6.50</p> <p>Number of items = 5</p> <p>Average price = Total price ÷ Number of items</p> <p>Average price = £6.50 ÷ 5 = £1.30</p> <p>Therefore, the average price of an item Amelia bought is £1.30.</p>	1
6	<p>6 hours and 15 minutes</p> <p>To calculate how long Tom spent working, we need to find the total time between his start and end times, then subtract the duration of his breaks.</p> <p>Start time: 8:30 am</p> <p>End time: 3:45 pm</p> <p>Total time between start and end:</p> <p>8:30 am to 3:45 pm = 7 hours and 15 minutes</p> <p>Break duration:</p> <p>Two 30-minute breaks = 2 × 30 minutes = 60 minutes (1 hour)</p> <p>Actual time spent working:</p> <p>7 hours and 15 minutes - 1 hour = 6 hours and 15 minutes</p> <p>Therefore, Tom spent 6 hours and 15 minutes working during his shift at the call centre.</p>	1
7	<p>106.4 m</p> <p>The diameter of a circle is twice the length of its radius.</p> <p>Given:</p> <p>- The radius of the circular running track is 53.2 m.</p> <p>To find the diameter, we multiply the radius by 2:</p> <p>Diameter = 2 × radius</p> <p>Diameter = 2 × 53.2 m</p> <p>Diameter = 106.4 m</p> <p>Therefore, the diameter of the circular running track is 106.4 m.</p>	1

8	70	<p>To calculate the total number of 10p sweets Sarah receives, we need to convert the £5 note and 50p coins into pence and then divide by 10 (as each sweet costs 10p).</p> <p>£5 is equal to 500 pence ($£5 \times 100 = 500\text{p}$).</p> <p>Sarah also has four 50p coins, which is equal to 200 pence ($50\text{p} \times 4 = 200\text{p}$).</p> <p>In total, Sarah has $500\text{p} + 200\text{p} = 700\text{p}$.</p> <p>As each sweet costs 10p, we divide 700p by 10 to find the number of sweets Sarah can buy:</p> <p>$700\text{p} \div 10 = 70$ sweets</p> <p>Therefore, Sarah receives 70 sweets in total.</p>
9	£3.74	<p>To find out how much more money Olivia and Emma need to save, we first need to calculate the total amount they have saved so far.</p> <p>Olivia has saved £12.50 and Emma has saved £8.75.</p> <p>$£12.50 + £8.75 = £21.25$</p> <p>The video game costs £24.99, so we need to subtract the total amount they have saved from the cost of the game.</p> <p>$£24.99 - £21.25 = £3.74$</p> <p>Therefore, Olivia and Emma need to save £3.74 more in total to be able to buy the video game.</p>
10	3 700	<p>To solve this problem, let's first calculate 37 multiplied by 100:</p> <p>$37 \times 100 = 3,700$</p> <p>Now, we need to determine which of the given options represents the same result when 37 is divided by 0.01.</p> <p>Dividing a number by 0.01 is equivalent to multiplying it by 100 because $0.01 = 1 \div 100$, and dividing by a fraction is the same as multiplying by its reciprocal.</p> <p>$37 \div 0.01 = 37 \times (1 \div 0.01) = 37 \times 100 = 3,700$</p> <p>Therefore, the correct answer is 3,700.</p>