

11+ Practice Test Answers

11+ Maths Test 27

Question	Answer	Explanation	Marks
1	240 kg	<p>To find the total mass of the sand, we need to multiply the volume of the tank by the mass of 1 litre of sand.</p> <p>The volume of the tank is 150 litres, and 1 litre of sand has a mass of 1.6 kg.</p> $150 \text{ litres} \times 1.6 \text{ kg/litre} = 240 \text{ kg}$ <p>Therefore, the total mass of the sand in the tank is 240 kg.</p>	1
2	177	<p>To find out how many pieces Liam still needs to assemble, we first calculate the total number of pieces he has assembled after 7 days:</p> <p>Pieces assembled per day: 153 Number of days: 7 Total pieces assembled: $153 \times 7 = 1,071$</p> <p>Now, we subtract the total pieces assembled from the total number of pieces required to complete the model aeroplane:</p> <p>Total pieces required: 1,248 Total pieces assembled: 1,071 Pieces remaining: $1,248 - 1,071 = 177$</p> <p>Therefore, after 7 days, Liam still needs to assemble 177 pieces to complete the model aeroplane.</p>	1
3	9	<p>A triangular prism has two triangular bases, each with three edges. It also has three rectangular faces, each with four edges.</p> <p>To find the total number of edges, we need to add the edges from the bases and the faces:</p> <p>Edges from bases: $2 \times 3 = 6$ Edges from faces: $3 \times 4 = 12$</p> <p>Total edges: $6 + 12 = 18$</p> <p>However, we have counted each edge twice because each edge is shared by two faces. To get the correct number of edges, we need to divide the total by 2:</p> $18 \div 2 = 9$ <p>Therefore, a triangular prism has 9 edges in total.</p>	1
4	£195	<p>To calculate how much money Amelia will have saved after 6 weeks, we need to:</p> <p>1. Calculate the total amount she will save over the 6 weeks:</p> <p>Weekly savings = £12.50 Number of weeks = 6 Total savings over 6 weeks = $£12.50 \times 6 = £75$</p> <p>2. Add this to the amount she already has in her piggy bank:</p> <p>Current savings = £120 Total savings after 6 weeks = $£120 + £75 = £195$</p> <p>Therefore, Amelia will have saved a total of £195 after 6 weeks.</p>	1

5	10 416	<p>To find the total number of cupcakes sold in 42 days, we need to multiply the number of cupcakes sold per day by the number of days.</p> <p>$248 \text{ cupcakes per day} \times 42 \text{ days} = 10,416 \text{ cupcakes}$</p> <p>Step-by-step calculation:</p> $248 \times 42 = (200 + 40 + 8) \times 42$ $= (200 \times 42) + (40 \times 42) + (8 \times 42)$ $= 8\,400 + 1\,680 + 336$ $= 10,416$ <p>Therefore, the bakery sells 10,416 cupcakes in 42 days.</p>	1
6	0.75 kg	<p>To find out how much the crab weighs, we need to divide its weight by 200 000, as it weighs 200 000 times less than the whale.</p> <p>Whale's weight = 150 000 kg, crab's weight = $150\,000 \text{ kg} \div 200\,000$</p> <p>To divide by 200 000, we can move the decimal point 5 places to the left (as there are 5 zeros in 200 000).</p> $150\,000 \div 200\,000 = 0.75$ <p>Therefore, the crab weighs 0.75 kg.</p>	1
7	Rectangle	<p>The correct answer is Rectangle because it satisfies all three requirements of the shape we're looking for: it has two pairs of parallel sides, its diagonals are equal but not perpendicular, and all its angles are 90° and therefore equal. While a parallelogram would also have two pairs of parallel sides and non-perpendicular diagonals, its angles aren't all equal. We can also eliminate both rhombus and square as options because although they have parallel sides, their diagonals are always perpendicular to each other.</p> <p>Copy</p>	1
8	151.43 g	<p>To find the average (mean) weight of the remaining toy cars, we need to:</p> <ol style="list-style-type: none"> Find the total weight of the remaining cars by subtracting the weight of the car taken out from the total weight of all cars. Divide the total weight of the remaining cars by the number of remaining cars. <p>Total weight of all cars = 1,200 g Weight of car taken out = 140 g Number of cars initially = 8</p> <p>Step 1: Total weight of remaining cars = $1,200 \text{ g} - 140 \text{ g} = 1,060 \text{ g}$</p> <p>Step 2: Number of remaining cars = $8 - 1 = 7$</p> <p>Step 3: Average weight of remaining cars = $1,060 \text{ g} \div 7 = 151.43 \text{ g}$ (rounded to 2 decimal places)</p> <p>Therefore, the average weight of the remaining toy cars in the box is 151.43 g.</p>	1

9	1 hour and 25 minutes	1
10	£7.50	1

To find out how long Amelia's swimming lesson lasted, we need to calculate the difference between the start time and the end time.

Start time: 4:15 pm

End time: 5:40 pm

First, let's calculate the difference in hours:

$$5 - 4 = 1 \text{ hour}$$

Now, let's calculate the difference in minutes:

$$40 - 15 = 25 \text{ minutes}$$

Therefore, Amelia's swimming lesson lasted 1 hour and 25 minutes.

To find the price of each box of cupcakes, we need to divide the total amount earned by the number of boxes sold.

First, let's calculate the number of boxes sold. We know that each box contains 12 cupcakes, and a total of 600 cupcakes were sold.

$$\text{Number of boxes sold} = 600 \div 12 = 50 \text{ boxes}$$

Now, we can divide the total amount earned (£450) by the number of boxes sold (50) to find the price of each box.

$$\text{Price per box} = £450 \div 50 = £9 \div 1.2 = £7.50$$

Therefore, each box of cupcakes was sold for £7.50.