



Area, Perimeter & Volume

Gold

These Gold questions require multi-step reasoning about compound shapes, missing measurements, and real-world contexts.

Name: _____ Date: _____

Section A: Area & Perimeter Reasoning

1. A garden is an $10\text{m} \times 8\text{m}$ rectangle with a $3\text{m} \times 3\text{m}$ square pond removed from one corner. What is the remaining area?

2. A triangle and a rectangle have the same area of 60cm^2 . If the rectangle is 10cm by 6cm , and the triangle has a base of 12cm , what is the triangle's height?

3. A room is 6m by 4.5m . Carpet costs $\pounds 15$ per square metre. What is the total cost to carpet the room?

4. A rectangular field has a perimeter of 100m . If the length is twice the width, what are the field's dimensions?

5. A compound shape is an L-shape made from a $10\text{cm} \times 8\text{cm}$ rectangle with a $4\text{cm} \times 3\text{cm}$ rectangle removed from one corner. What is the remaining area?

Section B: Volume Reasoning

1. A water tank is a cuboid $50\text{cm} \times 40\text{cm} \times 60\text{cm}$. How many litres does it hold when full ($1\text{ litre} = 1,000\text{cm}^3$)?

2. A box has a volume of 216cm^3 and is a cube. A smaller box is exactly half the height, width, and length. What is the smaller box's volume?

3. A cuboid-shaped swimming pool is 8m long, 4m wide, and 1.5m deep. How many cubic metres of water are needed to fill it?

4. Two identical cubes are joined together to form a cuboid. If each cube has sides of 4cm , what is the volume of the combined cuboid?

5. A cylinder-shaped water butt is being replaced with a cuboid tank of the same volume, 800 litres . If the new tank's base is $80\text{cm} \times 50\text{cm}$, what is its height, in centimetres ($1\text{ litre} = 1,000\text{cm}^3$)?

