

SMART EXAM RESOURCES
IGCSE PHYSICS ANSWERS[SAMPLE SOLUTIONS]
MAIN TOPIC: MOTION FORCES AND ENERGY

Answer 3

1. Explanation of the correct answer (A: 2.8 cm)

Step 1: Measure the outer diameter of the tube.

From the ruler in the diagram, the outer diameter of the tube spans from 1.0 cm to 7.0 cm, meaning the total outer diameter is:

$$7.4 \text{ cm} - 4.0 \text{ cm} = 3.4 \text{ cm}$$

Step 2: Calculate the internal diameter.

The tube's wall thickness is given as 3 mm, which is equivalent to 0.3 cm.

Since the thickness applies to both sides of the tube, we subtract twice the wall thickness from the outer diameter:

$$3.4.0 \text{ cm} - [2 \times 0.3 \text{ cm}] = 2.8 \text{ cm}$$

Thus, the internal diameter d is correctly calculated as 2.8 cm, corresponding to option A.