

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

Answer 2

1. Explanation of the correct answer (B: a ruler only)

To calculate the area of a bathroom tile, the decorator needs to measure its length and width.

A ruler is the appropriate tool to measure these dimensions accurately in centimeters or inches.

The formula to calculate area is:

$$\text{Area} = \text{Length} \times \text{Width}$$

Thus, a ruler only is sufficient for measuring the dimensions and calculating the required area, making option B the correct choice.

2. Explanation of why the other options are incorrect

Option A (a measuring cylinder only):

A measuring cylinder is used to measure the volume of liquids, not lengths or areas.

Since area calculation requires length and width, this option is incorrect.

Option C (a measuring cylinder and a clock only):

A clock measures time, which is irrelevant to calculating the area of a tile.

A measuring cylinder measures volume, which is also unnecessary for this task.

Therefore, this combination is incorrect.

Option D (a measuring cylinder and a ruler only):

Although a ruler is needed to measure the tile's dimensions, the measuring cylinder is unnecessary.

The presence of the measuring cylinder makes this option incorrect.

Conclusion:

The correct answer is B (a ruler only), as it is the appropriate tool required to measure the dimensions and calculate the area accurately.