Practical measurement models

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. A 5 m by 2.4 m wall has a 1.5 m^2 window. Find one-coat paintable area. [2 marks]

$5 \times 2.4 - 1.5 = 10.5$.

Answer: 10.5 m^2.

2. A 10.5 m^2 wall needs two coats at 7 m^2/L. Find paint needed. [2 marks]

$2 \times 10.5/7 = 3$.

Answer: 3 L.

3. A floor requires 48 tiles before an allowance. Add 12.5% for cuts. Find tile count. [2 marks]

$48 \times 1.125 = 54$.

Answer: 54 tiles.

4. A 4 m by 1.5 m garden bed needs soil 0.2 m deep. Find soil volume. [2 marks]

$4 \times 1.5 \times 0.2 = 1.2$.

Answer: 1.2 m^3.

5. Soil is sold in 30 L bags. How many bags fill 1.2 m^3? [2 marks]

Convert 1.2 m^3 to 1200 L.

$1200/30 = 40$.

Answer: 40 bags.

6. An irregular courtyard is modelled as one rectangle. Suggest a measurement that would test this assumption. [2 marks]

Different widths show that one rectangle may be unsuitable; split the measured shape into simpler regions.

Answer: Measure the width at several positions.