

Practice

Hint

Ratios are expressed using whole numbers and the same units. See the charts on the back cover for unit conversions.

1. Write each scale as a scale ratio.

a) 1 cm to 1 m

$$\frac{1 \text{ cm}}{\boxed{} \text{ cm}}, \text{ or } \underline{\hspace{2cm}}$$

c) 6 in. to 5 ft

$$\frac{6 \text{ in.}}{\boxed{} \text{ in.}}, \text{ or } \underline{\hspace{2cm}}$$

b) 5 mm to 1 m

$$\frac{5 \text{ mm}}{\boxed{} \text{ mm}}, \text{ or } \underline{\hspace{2cm}}$$

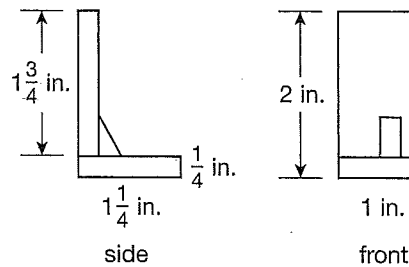
d) 2 ft to 4 yd

$$\frac{2 \text{ ft}}{\boxed{} \text{ ft}}, \text{ or } \underline{\hspace{2cm}}$$

Hint

Determine and use the scale factor for this problem.

2. Tajana found plans for a bookend in a woodworking magazine. The plans include a scale diagram. The scale ratio is 1:4. What are the length, thickness, and height of the bookend?



3. Akio drew a building plan. He used a scale of 5 in. on the diagram to represent 6 ft in the building.

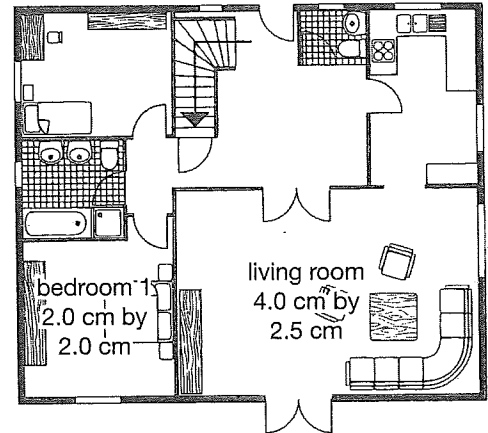
a) What is the scale of the plan?

b) What is the scale ratio of the plan?

4. Priya has a 1:20 scale toy glider that has a length of 33.6 cm, a wingspan of 90.0 cm, and a height of 6.8 cm. Determine these dimensions on the real glider.



5. This floor plan of an apartment is drawn with a scale of 1:200.
- a) What are the actual dimensions of bedroom 1?
- b) What are the actual dimensions of the living room?



6. Umiaks are boats used in the Arctic for transportation and traditional whale hunting.
- A typical umiak is 32 ft long. The beam, or width, is 48 in. Hilda is making a scale model with a scale ratio of 1:24. What dimensions should Hilda use for the length and the beam of her scale model?



7. What are some situations where scale diagrams are used?