

Lesson 3 Assessment

Using Scale Drawings

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Understands scale on a scale drawing

The scale is the ratio of a length in the drawing to the corresponding length in the actual object. For example, if a scale measurement of 5 cm represents an actual measurement of 35 m, then the scale is 1 cm : 7 m. The scale drawing and the shape of the actual object are similar.

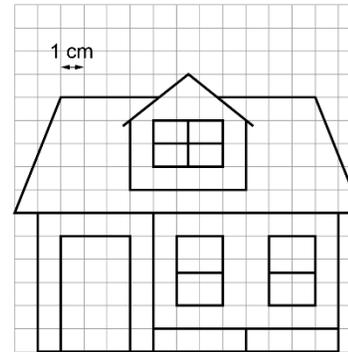
Uses a scale to determine actual dimensions

On the scale drawing, the length of a building is 15 cm. The scale of the drawing is 1 cm = 2 m. Determine the actual length of the building.

1 cm = 2 m. The scale factor is 2.
 $15 \times 2 = 30$
 So, 15 cm is equivalent to 30 m.
 The actual length of the building is 30 m.

Creates a scale drawing given a scale

1 cm = 2 m



For example, the actual length was 30 m. So, the scale measurement is $30 \div 2$, or 15 cm.

Solves problems using scale drawings

In a scale drawing, a rectangular classroom is 18 cm by 24 cm. If the scale is 1 cm = 0.5 m, what is the area of the room?

The area of the scale drawing is $18 \text{ cm} \times 24 \text{ cm} = 432 \text{ cm}^2$.

Convert to square metres.
 1 cm = 0.5 m, so the scale factor is 0.5. Then, $(1 \text{ cm})^2 = (0.5 \text{ m})^2$, or 0.25 m^2 . The scale factor is 0.25.
 $432 \times 0.25 = 108$
 The area of the room is 108 m^2 .

Observations/Documentation