

Scale drawing: Beginner

Use the labels, not a ruler. Figures are illustrations, not full-size measurements.

SC01 6 m wide and 4 m high.

Width: $3 \times 2 = 6$ m. Height: $2 \times 2 = 4$ m.

SC02 12 m wide and 9 m high.

Width: $4 \times 3 = 12$ m. Height: $3 \times 3 = 9$ m.

SC03 20 m wide and 8 m high.

Width: $5 \times 4 = 20$ m. Height: $2 \times 4 = 8$ m.

SC04 12 m wide and 8 m high.

Width: $6 \times 2 = 12$ m. Height: $4 \times 2 = 8$ m.

SC05 15 m wide and 25 m high.

Width: $3 \times 5 = 15$ m. Height: $5 \times 5 = 25$ m.

SC06 14 m wide and 8 m high.

Width: $7 \times 2 = 14$ m. Height: $4 \times 2 = 8$ m.

Length scales once. Area scales by the square of the length factor. Keep units through every step.

Scale drawing: Intermediate

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SC07 4 cm.

8 m = 800 cm. Drawing length = $800 / 200 = 4$ cm.

SC08 1.4 m.

$3.5 \times 40 = 140$ cm. 140 cm = 1.4 m.

SC09 12 cm.

9 m = 900 cm. $900 / 75 = 12$ cm.

SC10 2 in.

$8 \times 1/4 = 2$ in. Do not convert the scale into 1:4.

SC11 10 ft.

$2.5 / (1/4) = 10$ ft.

SC12 6 in by 4 in.

$12 \times 1/2 = 6$ in. $8 \times 1/2 = 4$ in.

Length scales once. Area scales by the square of the length factor. Keep units through every step.

Scale drawing: Challenge

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SC13 48 m².

Actual sides: 8 m and 6 m. Area = $8 \times 6 = 48 \text{ m}^2$.

SC14 108 m².

Base = 18 m; height = 12 m. Area = $18 \times 12 / 2 = 108 \text{ m}^2$.

SC15 1.5 m².

Sides = 100 cm and 150 cm = 1 m and 1.5 m. Area = 1.5 m^2 .

SC16 8 cm.

Real length = $4 \times 100 = 400 \text{ cm}$. New drawing = $400 / 50 = 8 \text{ cm}$.

SC17 96 ft².

Sides = $3 / (1/4) = 12 \text{ ft}$ and $2 / (1/4) = 8 \text{ ft}$. Area = 96 ft^2 .

SC18 108 cm².

Area factor = $3 \times 3 = 9$. New area = $12 \times 9 = 108 \text{ cm}^2$.

Length scales once. Area scales by the square of the length factor. Keep units through every step.