

Grade 7 - Scale Drawings - Test Answer Key

Common Core 7.G.A.1 · maths-pdf.fr/en/

Use this answer key and scoring guide to grade the scale drawings test. Each solution shows the full work, and the scoring note explains how the points are awarded. Give partial credit for correct steps even when the final answer is wrong.

Grade 7 · Common Core State Standards: 7.G.A.1

Question 1 - Actual length [2 pts]

$$3.5 \times 12 = 42$$

42 feet

Scoring: 1 point for the rate; 1 point for 42 feet.

Question 2 - Find the scale [2 pts]

$$60 \div 4 = 15, \text{ so } 1 \text{ in} = 15 \text{ mi.}$$

$$6.5 \times 15 = 97.5$$

1 in = 15 mi; 97.5 miles

Scoring: 1 point for the scale; 1 point for the distance.

Question 3 - Floor plan [2 pts]

$$3.5 \times 8 = 28 \text{ ft and } 2 \times 8 = 16 \text{ ft.}$$

$$28 \times 16 = 448$$

28 ft by 16 ft; 448 square feet

Scoring: 1 point for both dimensions; 1 point for the area.

Question 4 - Fraction scale [2 pts]

1 in = 6 ft.

$$2.5 \times 6 = 15$$

15 feet

Scoring: 1 point for the unit rate; 1 point for the answer.

Question 5 - Scale factor [2 pts]

8 ft = 96 in.

1:96

1 : 96

Scoring: 1 point for converting units; 1 point for the ratio.

Question 6 - Area [2 pts]

Each square inch is $2 \times 2 = 4$ square feet.

$$8 \times 4 = 32 \text{ square feet.}$$

Area depends on two lengths, so the factor is squared.

32 square feet

Scoring: 1 point for the area; 1 point for the explanation.

Question 7 - Redraw at a new scale [2 pts]

$$7.5 \times 4 = 30 \text{ ft.}$$

$$30 \div 6 = 5$$

5 inches

Scoring: 1 point for the actual length; 1 point for the new length.

Question 8 - Patio [3 pts]

a. $5 \times 4 = 20$ ft and $3 \times 4 = 12$ ft.

b. $20 \times 12 = 240$ sq ft; $2(20 + 12) = 64$ ft.

c. $240 \times 4.50 = 1080$, so \$1,080.

Item	Value
Actual size	20 ft by 12 ft
Area	240 sq ft
Perimeter	64 ft
Pavers cost	\$1,080

Summary.

Scoring: 1 point for each part.

Question 9 - Two drawings [3 pts]

a. $12 \div 2 = 6$ in.

b. $12 \div 3 = 4$ in.

c. $6 \div 4 = 1.5$ times as long.

Drawing	Scale	Wall on paper
A	1 in = 2 ft	6 in
B	1 in = 3 ft	4 in

Completed table.

Scoring: 1 point for each part.

Total
20 points