

Grade 7 - Scale Drawings - Quiz

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

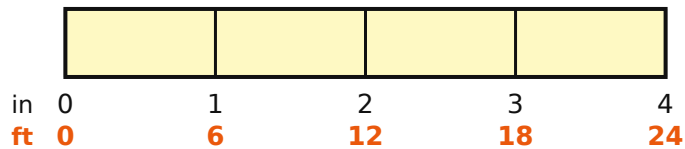
Name: _____ Class: _____ Date: ____/____/____

Answer all 10 multiple-choice questions on scale drawings, including finding actual lengths and areas, scale factors, and reproducing a drawing at a different scale. Pick the single best answer, then read the explanation to see why it is right and which common mistake each wrong choice shows. A score of 8 or more means you are ready for the test.

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

Questions

Question 1



A scale drawing uses 1 in = 6 ft. A room is 4 in long on the drawing. What is its actual length?

- A. 24 feet
- B. 10 feet
- C. 1.5 feet
- D. $\frac{2}{3}$ foot

Question 2

A 30-foot yard is drawn with scale 1 in = 5 ft. How long is it on the drawing?

- A. 150 inches
- B. 6 inches
- C. 35 inches
- D. 25 inches

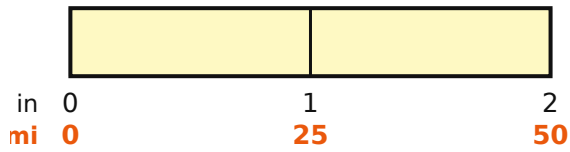
Question 3

Which scale is the same as the ratio 1 : 12?

- A. 1 in = 12 ft
- B. 1 in = 1 ft
- C. 1 ft = 12 ft

D. 12 in = 1 ft

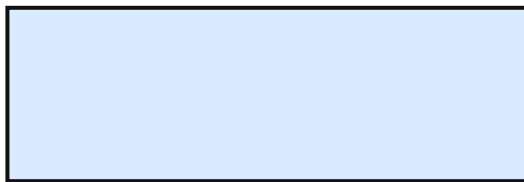
Question 4



On a map, 2 in stands for 50 mi. What is the scale in miles per inch?

- A. 25 miles per inch
- B. 100 miles per inch
- C. 52 miles per inch
- D. 48 miles per inch

Question 5



3 sq in

Scale: 1 in = 4 ft

A drawing has scale 1 in = 4 ft. A pond has area 3 sq in on the drawing. What is the actual area?

- A. 12 sq ft
- B. 48 sq ft
- C. 24 sq ft
- D. 36 sq ft

Question 6

A blueprint uses $\frac{1}{4}$ in = 1 ft. A wall is 2 in on the blueprint. What is its actual length?

- A. $\frac{1}{2}$ foot
- B. 2 feet
- C. 8 feet
- D. 4 feet

Question 7

The scale is 1 in = 10 ft. A line is 2.5 in long. What is the actual length?

- A. 4 feet
- B. 12.5 feet
- C. 25 feet

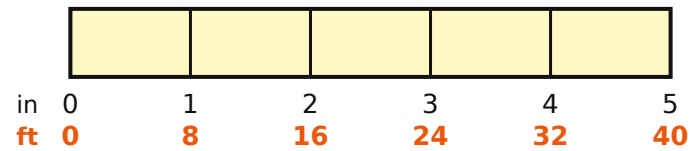
D. 250 feet

Question 8

If the lengths in a drawing are 3 times the actual lengths, the area in the drawing is how many times the actual area?

- A. 3
- B. 6
- C. 27
- D. 9

Question 9



A wall is 5 in on a drawing with scale 1 in = 8

ft. How long is it at scale 1 in = 4 ft?

- A. 2.5 inches
- B. 5 inches
- C. 40 inches
- D. 10 inches

Question 10

Priya says a scale of 1 in = 5 ft has a scale factor of $\frac{1}{5}$. What is her mistake?

- A. She did not convert feet to inches
- B. She should have added 12
- C. Scale factors are always 1
- D. She should have multiplied by 5 twice

Answers

1. **A** - Multiply by 6: $4 \times 6 = 24$. Dividing gives the wrong direction.
2. **B** - Divide by 5: $30 \div 5 = 6$.
3. **B** - 1 ft = 12 in, so 1 in : 12 in is 1 : 12.
4. **A** - $50 \div 2 = 25$.
5. **B** - Each square inch is $4 \times 4 = 16$ sq ft, so $3 \times 16 = 48$.
6. **C** - 1 in = 4 ft, so 2 in = 8 ft.
7. **C** - $2.5 \times 10 = 25$.
8. **D** - Area changes by the square of the length factor: $3^2 = 9$.
9. **D** - Actual is $5 \times 8 = 40$ ft. At 4 ft per inch, $40 \div 4 = 10$ in.
10. **A** - 5 ft is 60 in, so the scale factor is $\frac{1}{60}$.

Remember

- The scale is a rate: $1\text{ in} = 5\text{ ft}$ means 5 feet per 1 inch.
- Actual length = drawing length * rate; drawing length = actual length $\div$ rate.
- Scale factor compares drawing length to actual length in the same units.
- Actual area = drawing area * (rate)².
- To change scales, find actual lengths first, then divide by the new rate.