

Grade 7 · Scale Drawings · Test

Common Core 7.G.A.1 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

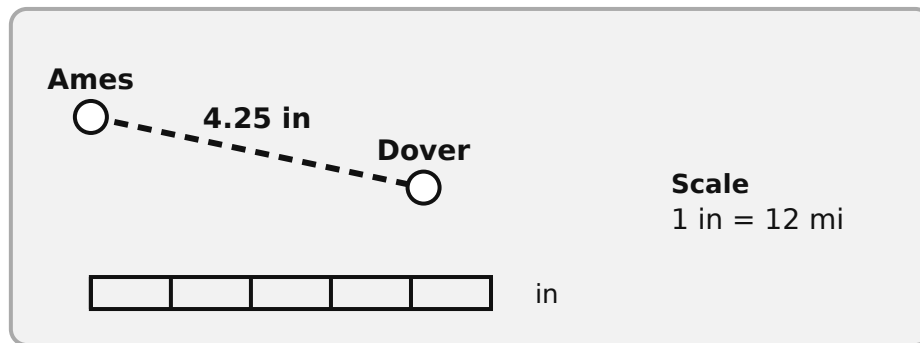
This 45-minute test covers Common Core 7.G.A.1. Use scales to find actual lengths and areas, write scales, and redraw figures at a new scale. Show your work and include units. The test is worth 20 points.

Test information

- **Grade:** Grade 7
- **Chapter:** Scale Drawings
- **Common Core:** 7.G.A.1
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 2 pts; Question 7: 3 pts; Question 8: 3 pts; Question 9: 2 pts)

Question 1: Map distance (2 points)

The scale of a map is $1 \text{ in} = 12 \text{ mi}$. Two towns are 4.25 in apart on the map. Find the actual distance between them.



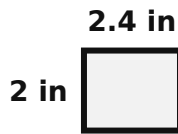
Distance on the map: 4.25 in .

Question 2: Finding a scale (2 points)

A 10 ft tall tree is drawn 2.5 in tall in a scale drawing. Write the scale as $1 \text{ in} = \underline{\hspace{1cm}} \text{ ft}$.

Question 3: Bedroom blueprint (2 points)

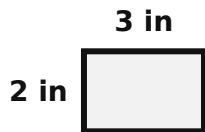
The blueprint of a bedroom is a rectangle 2.4 in by 2 in. The scale is 1 in = 5 ft. Find the actual length and width of the bedroom.



Blueprint at 1 in = 5 ft (shown at one-half size).

Question 4: Garden area (2 points)

A garden plan is a rectangle 3 in by 2 in with the scale 1 in = 4 ft. Find the actual area of the garden.



Garden plan at 1 in = 4 ft (shown at one-half size).

Question 5: Redraw the pool (2 points)

A pool is drawn 5 in by 2 in at the scale 1 in = 5 ft. Find the pool's dimensions in a new drawing at the scale 1 in = 2.5 ft.

Question 6: Model truck (2 points)

A model truck is 6 in long. The real truck is 18 ft long. Write the scale as 1 in = ____ ft.

Question 7: Fractional map scale (3 points)

A map uses the scale $\frac{1}{2}$ in = 5 mi.

- How many actual miles does 1 in represent? (1 point)
- Two cities are 3 in apart on the map. Find the actual distance. (1 point)
- Two other cities are 85 mi apart. Find their distance on the map. (1 point)

Question 8: Area mistake (3 points)

A room is 12 in² on a scale drawing with 1 in = 5 ft. Marcus says the actual area is

$$12 \times 5 = 60 \text{ ft}^2.$$

- a. Find the actual area of the room. (1 point)
- b. Explain Marcus's mistake. (1 point)
- c. By what number is the drawing area multiplied to get the actual area? (1 point)

Question 9: Fitting on a card (2 points)

Aisha wants to draw her 20 ft by 14 ft room using the scale 1 in = 8 ft on an index card that is 3 in by 2 in. Find the drawing dimensions. Does the drawing fit on the card?