

Unit 1: Scale Drawings

ADVANCED · SET 2

Name: _____ Date: _____

Show your work and write each final answer on the line provided; give fractions in lowest terms and use exact values (leave pi in answers).

1. A scaled copy of a polygon is made using a scale factor of $\frac{5}{2}$. One side of the original polygon is 14 cm. How long is the corresponding side in the scaled copy?

Answer: _____

3. Rectangle A is a scaled copy of Rectangle B. A side of length 45 mm in B corresponds to a side of length 27 mm in A. What is the scale factor from B to A, as a fraction in lowest terms?

Answer: _____

5. A scaled copy of a figure has area 128 in^2 , while the original figure has area 8 in^2 . What is the scale factor used to create the copy?

Answer: _____

7. A map has a scale of 1 inch to 60 miles. Two cities are actually 348 miles apart. How far apart are they on the map, in inches? Give your answer as a decimal.

Answer: _____

9. A scale drawing of a rectangular garden uses the scale 1 cm to 2.5 m. On the drawing the garden is 8 cm by 6 cm. What is the actual area of the garden, in square meters?

Answer: _____

2. A scaled copy is created with scale factor $\frac{3}{8}$. A segment in the copy is 21 cm long. How long was the corresponding segment in the original figure?

Answer: _____

4. A triangle has an area of 24 cm^2 . A scaled copy is made with scale factor $\frac{5}{2}$. What is the area of the scaled copy, in cm^2 ?

Answer: _____

6. On a scale drawing, the scale is 1 cm to 4.5 m. A wall measures 6 cm on the drawing. What is the actual length of the wall, in meters?

Answer: _____

8. A blueprint uses a scale of 2 cm to 3 m. A room is actually 13.5 m long. What is its length on the blueprint, in cm?

Answer: _____

10. Figure P is a scaled copy of Figure Q with scale factor $\frac{4}{3}$. Figure Q is a scaled copy of Figure R with scale factor $\frac{9}{8}$. What is the scale factor from Figure R to Figure P, as a fraction in lowest terms?

Answer: _____

11. A scale drawing uses 1 cm to represent 20 km. A region has an actual area of 8000 km^2 . What is the area of that region on the drawing, in cm^2 ?

Answer: _____

12. A scaled copy of a triangle uses scale factor $\frac{7}{4}$. The original triangle has a perimeter of 32 cm and an area of 48 cm^2 . Find the sum (in consistent units, dropping labels) of the copy's perimeter in cm and the copy's area in cm^2 .

Answer: _____