

ANSWERS

SCALE DRAWINGS

Instructions: Read each problem carefully, establish a proportion, solve for the actual size, and show your work with the correct units in your answer.

Exercise 1: Lena is making a map of a park with a scale of 1 inch : 8 meters. She draws a pond that is 5 inches long on the map. What is the actual length of the pond?

Solution: The scale is 1 inch : 8 meters. This means 1 inch represents 8 meters. If the pond is 5 inches long, then:

Actual length = 5 inches \times 8 meters = 40 meters.

Answer: The actual length of the pond is 40 meters.

Exercise 2: A model airplane is built with a scale of 1 centimeter : 2 meters. If the model airplane is 12 centimeters long, how long is the actual airplane?

Solution: The scale is 1 centimeter : 2 meters. This means 1 centimeter represents 2 meters. If the model airplane is 12 centimeters long, then:

Actual length = 12 centimeters \times 2 meters = 24 meters.

Answer: The actual airplane is 24 meters long.

Exercise 3: A student is drawing a garden using a scale of 2 centimeters : 10 meters. The garden on the drawing is 18 centimeters wide. What is the actual width of the garden?

Solution: The scale is 2 centimeters : 10 meters. This means 2 centimeters represent 10 meters. If the garden is 18 centimeters wide, then:

Actual height = $\left(\frac{18 \text{ centimeters}}{2 \text{ centimeters}}\right) \times 10 \text{ meters} = 9 \times 10 = 90 \text{ meters}$.

Answer: The actual width of the garden is 90 meters.

How Did You Do? 