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: A scale model of a skyscraper uses a ratio of 1 centimeter : 10 meters. If the model is 20 centimeters tall, how tall is the actual skyscraper?

Solution: The scale is 1 centimeter : 10 meters. This means 1 centimeter represents 10 meters. If the model is 20 centimeters tall, then:

Actual height = 20 centimeters × 10 meters = 200 meters.

Answer: The actual skyscraper is 200 meters tall.

Exercise 2: A town plan uses a scale of 2 centimeters : 50 meters. If a road on the plan is 12 centimeters long, what is the actual length of the road?

Solution: The scale is 2 centimeters : 50 meters. This means 2 centimeters represent 50 meters. If the road is 12 centimeters long, then:

Actual length = $\left(\frac{12\ centimeters}{2\ centimeters}\right)$ × 50 meters = 6 × 50 = 300 meters.

Answer: The actual length of the road is 300 meters.

Exercise 3: An architect's drawing uses a scale of 1 inch : 4 feet. If the drawing shows a room that is 25 inches long, how long is the actual room?

Solution: The scale is 1 inch : 4 feet. This means 1 inch represents 4 feet. If the drawing shows a room that is 25 inches long, then:

Actual length=25 inches×4 feet=100 feet.

Answer: The actual room is 100 feet long.

How Did You Do? ☺ 😐 ☹