

Algebra 1

Chapter 2
Section 2-8

Vocabulary

Similar
Figures

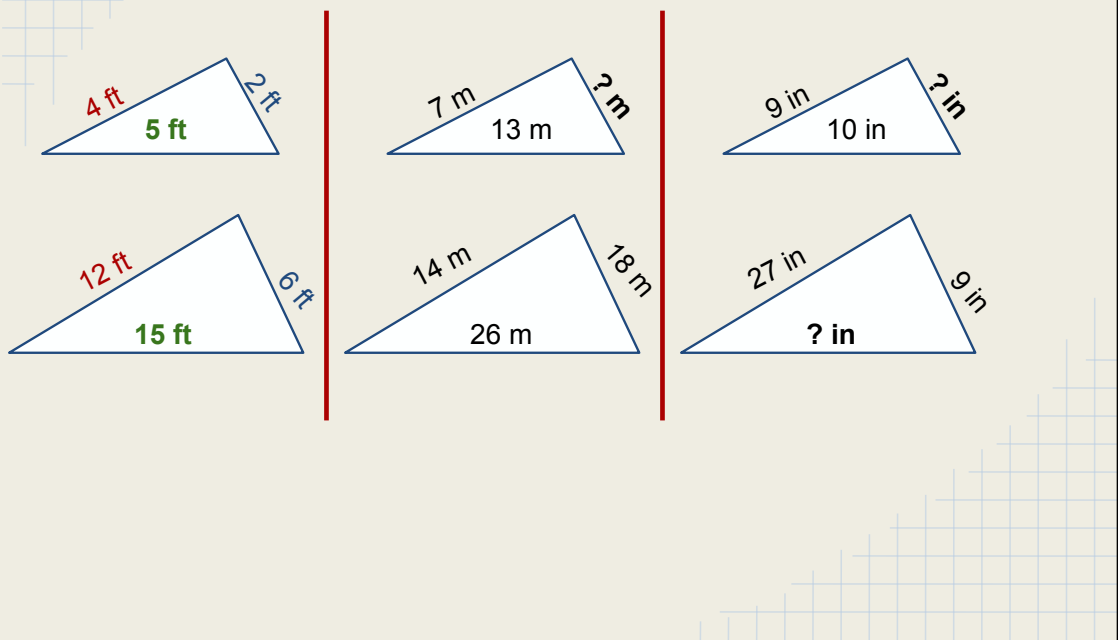
Same Shape but not always the
same size

Scale Drawing

Drawing similar to an actual
object or place.

*The ratios of any measurements is always the same

Similar Triangles



Using Similar Figures

Indirect Measurement The sun's rays strike the building and the girl at the same angle, forming the two similar triangles shown. How tall is the building?

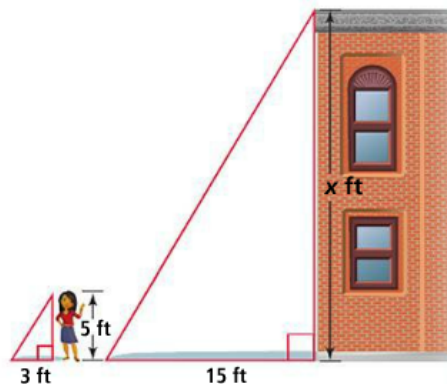
$$\frac{\text{girl's shadow}}{\text{building's shadow}} = \frac{\text{girl's height}}{\text{building's height}}$$

$$\frac{3}{15} = \frac{5}{x} \quad \text{Substitute.}$$

$$3x = 15(5) \quad \text{Cross Products Property}$$

$$3x = 75 \quad \text{Multiply.}$$

$$x = 25 \quad \text{Divide each side by 3.}$$



Scale Drawings (Maps)



SCALE
1 in = 25 mil

On our map, we measure the distance from Kansas City to Columbia as 5 inches. What is the actual distance between the two cities?