

Writing  
Proportions

Solving  
Proportions

Scale  
Drawings

Similar  
Figures

Example 1:

$$\frac{8}{x} = \frac{6}{15}$$

Example 2:

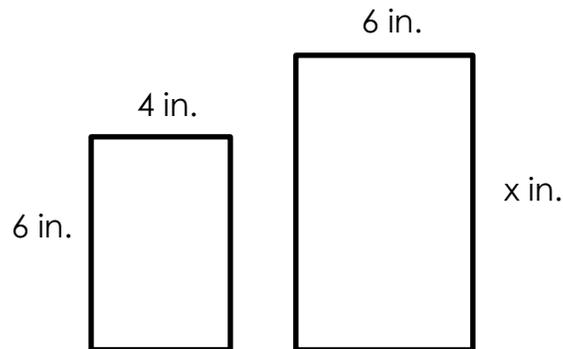
$$\frac{x}{20} = \frac{8}{4}$$

Example 3:

A utility worker is 5.5 feet tall and is casting a shadow 4 feet long. At the same time, a nearby utility pole casts a shadow 20 feet long. Write and solve a proportion to find the height of the utility pole.

Example 4:

Find the value of x.



Example 5:

The length of an object on a scale drawing is 2cm, and its actual length is 8m. The scale is 1cm:  m. What is the scale?

Example 6:

A model of a 27 ft tall house was made using a scale of 2 in: 3 ft. What is the height of the model?

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### Example 1:

$$\frac{8}{x} = \frac{6}{15}$$

$$6x = 8(15)$$

$$6x = 120$$

$$x = 20$$

### Example 2:

$$\frac{x}{20} = \frac{8}{4}$$

$$4x = 8(20)$$

$$4x = 160$$

$$x = 40$$

### Example 3:

A utility worker is 5.5 feet tall and is casting a shadow 4 feet long. At the same time, a nearby utility pole casts a shadow 20 feet long. Write and solve a proportion to find the height of the utility pole.

$$\frac{5.5\text{ft}}{4\text{ft}} = \frac{x}{20\text{ft}}$$

$$4x = 20(5.5)$$

$$4x = 110$$

$$x = 27.5$$

### Example 4:

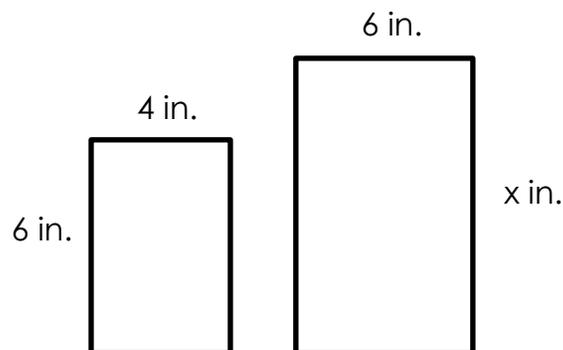
Find the value of x.

$$\frac{4\text{ in.}}{6\text{ in.}} = \frac{6\text{ in.}}{x\text{ in.}}$$

$$4x = 6(6)$$

$$4x = 36$$

$$x = 9\text{ in.}$$



### Example 5:

The length of an object on a scale drawing is 2cm, and its actual length is 8m. The scale is 1cm:  $\square$  m. What is the scale?

$$\frac{2\text{ cm}}{1\text{ cm}} = \frac{8\text{ m}}{x\text{ m}}$$

$$2x = 8(1)$$

$$2x = 8$$

$$x = 4\text{ m.}$$

### Example 6:

A model of a 27 ft tall house was made using a scale of 2 in: 3 ft. What is the height of the model?

$$\frac{2\text{ in.}}{x\text{ in.}} = \frac{3\text{ ft.}}{27\text{ ft.}}$$

$$3x = 2(27)$$

$$3x = 54$$

$$x = 18\text{ in.}$$

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