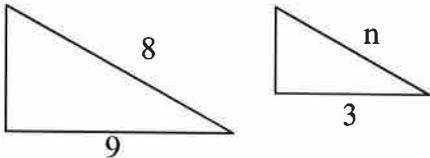


2-8 Proportions and Similar Figures

The figures in each pair are similar. Use a proportion to find the missing length. Round to the nearest tenth if necessary.

1.



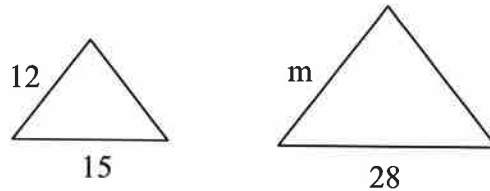
$$\frac{8}{n} = \frac{9}{3}$$

$$8(3) = 9(n)$$

$$\frac{24}{9} = \frac{9n}{9}$$

$$n \approx 2.7$$

2.



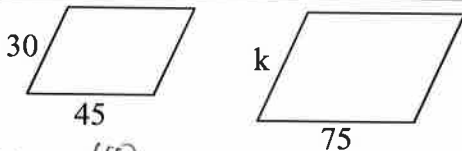
$$\frac{12}{m} = \frac{15}{28}$$

$$12(28) = m(15)$$

$$\frac{336}{15} = \frac{15m}{15}$$

$$m = 22.4$$

3.



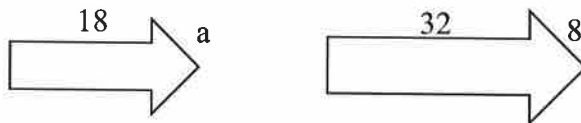
$$\frac{30}{k} = \frac{45}{75}$$

$$30(75) = k(45)$$

$$\frac{2250}{45} = \frac{45k}{45}$$

$$50 = k$$

4.



$$\frac{18}{32} = \frac{a}{8}$$

$$18(8) = 32(a)$$

$$\frac{144}{32} = \frac{32a}{32}$$

$$a = 4.5$$

Write a proportion to represent this situation, and then solve it.

5. A professional model-maker is building a scale model of an airplane to go in a hotel lobby. The actual plane is about 200 ft long with a wingspan of about 240 ft. The model airplane will be 24 ft long. What will its wingspan be?

$$\frac{\text{plane}}{\text{model}} \quad \frac{200}{24} = \frac{240}{x}$$

$$200(x) = 24(240)$$

$$\frac{200x}{200} = \frac{5760}{200}$$

$$x = 28.8$$

The wingspan of the model will be 28.8 ft.