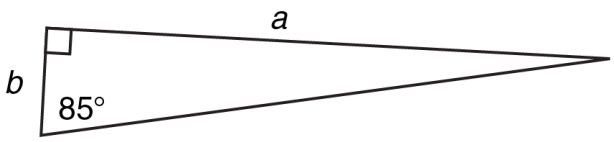
Lesson 4 Practice Questions

Lesson 1

Tangent Side Length Ratios

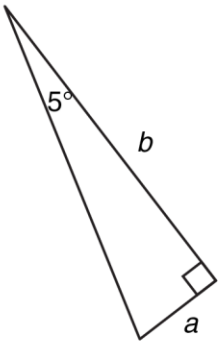
1. Use the tangent ratio table to state a ratio of sides for each of the following triangles. Explain what each ratio represents.

a.



The value produced when the length of side a is divided by the length of side b is 11.43.

b.



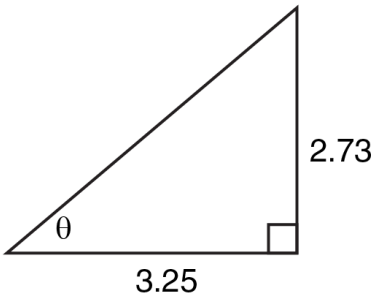
The value produced when the length of side a is divided by the length of side b is 0.09.

2. Using the tangent ratio table, determine the measure of angle θ in each of the following triangles.

a.

$$\frac{21.5}{1.5} = 14.33, \text{ so } \theta = 86°$$

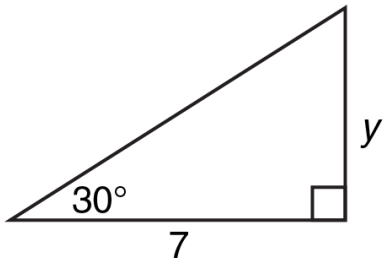
b.



$$\frac{2.73}{3.25} = 0.84, \text{ so } \theta = 40°$$

3. Using the tangent ratio table, determine the value of the variable, to the nearest tenth, in each triangle shown.

a.



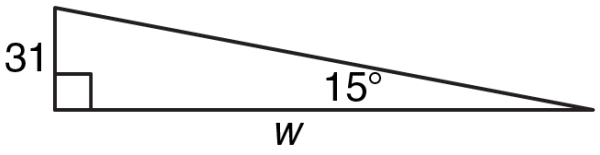
$$\frac{\text{length opposite } 30°}{\text{length adjacent to } 30°} = 0.58$$

$$\frac{y}{7} = 0.58$$

$$\frac{y}{7} \times 7 = 0.58 \times 7$$

$$y = 4.1$$

b.



$$\frac{\text{length opposite } 15°}{\text{length adjacent to } 15°} = 0.27$$

$$\frac{31}{w} = 0.27$$

$$\frac{31}{w} \times w = 0.27 \times w$$

$$31 = 0.27w$$

$$\frac{31}{0.27} = \frac{0.27w}{0.27}$$

$$114.8 = w$$