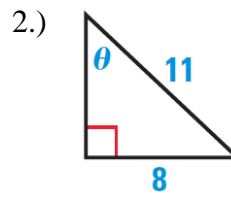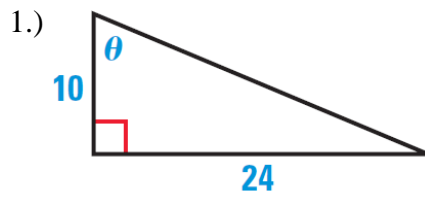# Lesson 13.1 Worksheet

Name: _____

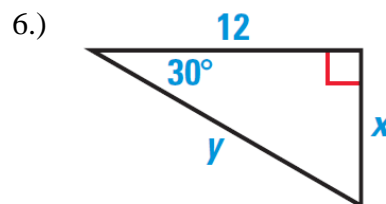**Evaluate the six trigonometric functions of the angle θ.**
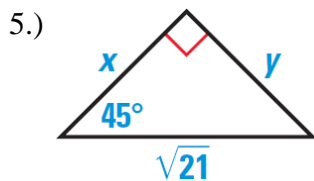
1.)

2.)

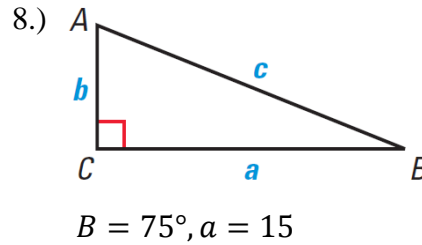**Let θ be an acute angle of a right triangle. Find the values of the other five trigonometric fucntions of θ.**

3.) $\cos \theta = \dfrac{5}{8}$
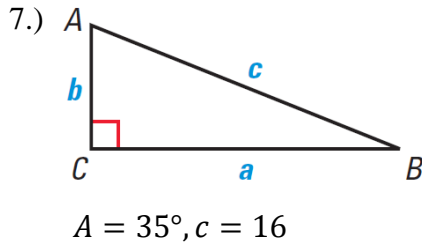
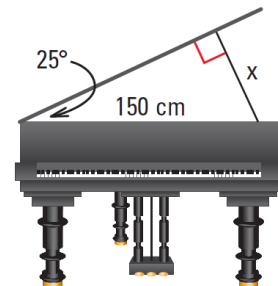4.) $\sec \theta = \dfrac{12}{5}$

Find the exact values of *x* and *y*.

5.)

6.)

Solve ΔABC using the diagram and the given measurements. Round answers to the nearest tenth, when necessary.

7.)

$A = 35°, c = 16$

8.)

$B = 75°, a = 15$

9.) A tree casts a 25 ft shadow when the sun is at a $31°$ angle of elevation. About how tall is the tree? (Make a picture)

10.) Find the length of the prop holding open the piano.

11.) The Falls Incline Railway at Niagara Falls has an angle of elevation of $36°$. The railway extends a horizontal distance of about 138 feet. Find the height and length of the railway. (Make a picture)