## Assignment 7B: 6 Trigonometry Functions

Answer the following problems with as much detail, explanation, and work that is appropriate.

1. If 
$$\cos(\theta) = \frac{1}{5}$$
, and  $\theta$  is in quadrant I, find  $\sin(\theta)$ ,  $\sec(\theta)$ ,  $\csc(\theta)$ ,  $\tan(\theta)$ ,  $\cot(\theta)$ 

2. If 
$$\tan(\theta) = 4$$
, and  $0 \le \theta < \frac{\pi}{2}$ , find  $\sin(\theta)$ ,  $\cos(\theta)$ ,  $\sec(\theta)$ ,  $\csc(\theta)$ ,  $\cot(\theta)$ 

Simplify each of the following to an expression involving a single trig function with no fractions. To do this, it may help to rewrite each trig. function in terms of *opposite*, *adjacent*, and *hypotenuse*.

- 1.  $\csc(t)\tan(t)$
- 2.  $\cos(t)\csc(t)$
- 3.  $\frac{\sec(t)}{\csc(t)}$

4.  $\frac{\cot(t)}{\csc(t)}$