**Activity 6.6.2 Find the Other Two**

For each real number t, we can take three trigonometric functions of t: sin(t), cos(t) and tan(t).

For each given trigonometric value, find the other two. Show you did this two different ways:

a)Geometrically: sketch an angle t in standard position and label one leg and the hypotenuse of the reference triangle. Then find the other leg. Using the sketch of the triangle, find sin *t*, cos *t* or tan *t* as needed.

b) Algebraically: In the Pythagorean Identity (sin t)2 + (cos t)2 = 1, substitute the given trigonometric value, and then solve for the unknown value. Also use the identity:

1. . t is in quadrant II . cos(t) = \_\_\_\_\_ tan(t) = \_\_\_\_\_

a.

b.

2. . t is in quadrant III sin(t) = \_\_\_\_\_\_\_\_ tan (t) = \_\_\_\_\_\_\_

a.

b.

3. . t is in quadrant IV sin(t) = \_\_\_\_\_\_\_\_ tan(t) = \_\_\_\_\_\_\_

a.

b.

4. . t is in quadrant IV sin(t) = \_\_\_\_\_\_\_\_ cos(t) = \_\_\_\_\_\_\_

In quadrant IV, what is the sign of y? \_\_ What is the sign of x? \_\_\_

Possible hints: tan(t)= ;

x2 + y2 = 1;

tan(t) =