Name_____ ID: 1
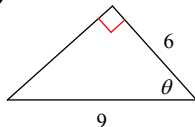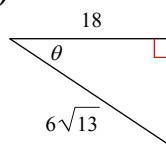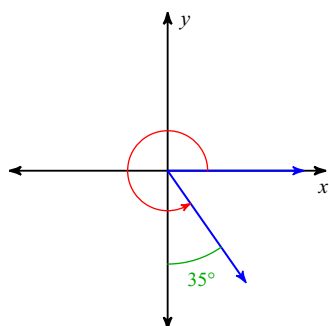
SM3-A HW 9-2 (Radian Measure, Coterminal Angles)   Date_____ Period____

Find the value of the trig function indicated. Do not give these values in decimal form. I want them in fraction form with simplified radicals (if applicable).
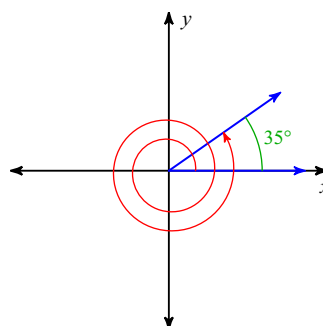
1) $\csc\theta$

2) $\cot\theta$

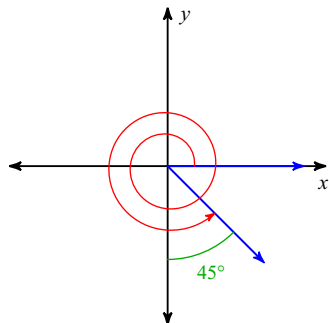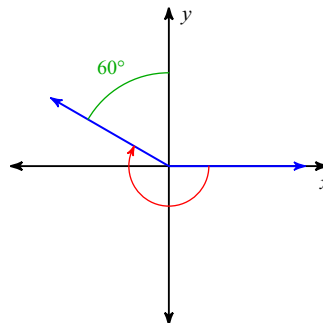**Find the measure of each angle.**

3)

4)

5)

6)

7) Draw a 30-60-90 right triangle whose hypotensuse length = 1. What are the lengths of the legs?

8) Draw a 45-45--90 right triangle whose hypotenuse length =1. Label the lengths of the legs.

9) If the sine, cosine, and tangent ratios are defined based upon the sides of right triangles, how do we figure out these ratios for angles that are outside of the range $0 \le \theta \le 90$? (2 requirements)

10) a) What is a reference angle?
   b) Where is the vertex of a reference angle?
   c) What is the minimum and maximum measurements of a reference angle?

Convert each degree measure into radians.

11) -120°

12) 270°

Convert each radian measure into degrees.

13) $-\dfrac{5\pi}{6}$

14) $\dfrac{2\pi}{3}$

Find a positive and a negative coterminal angle for each given angle.
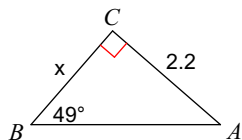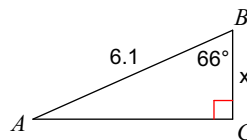
15) 60°

16) 675°

17) $\dfrac{5\pi}{6}$

18) $\dfrac{46\pi}{15}$

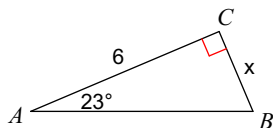**Find the measure of each side indicated. Round to the nearest tenth.**

19)

20)

21)

22)