CHAPTER REVIEW

1. Draw the following angles in standard position. Also, find their reference angles.:

    a. 672°

    b. $-\dfrac{3\pi}{4}$

2. Find two angles, one positive and one negative, which are coterminal with

    a. 635°

    b. $\dfrac{5\pi}{6}$

3. In what quadrant is the following true:

    a. cos θ < 0 and csc θ > 0

    b. cot θ < 0 and sec θ > 0

4. Find the value of each of the following. Round to the nearest thousandth.
   (Use a calculator)

    a. tan (-30°) =

    b. csc (125°) =

    c. sec $\dfrac{-\pi}{6}$ =

    d. cot $\dfrac{5\pi}{6}$ =

5. What are the quadrantals? What are coterminal angles? What are reference angles?

6. Your football has landed at the edge of the roof of your school building. When you are 25 ft from the base of the building, the angle of elevation to your football is 22°. How high off the ground is your football?

7. The height of a radio transmission tower is 70 meters and it casts a shadow of length 30 meters. Find the angle of elevation of the sun.

8. The angle of depression from an airplane to an airport is 25°. If the plane is flying at an altitude of 1200 m and is directly over a baseball field, how far is it from the baseball field to the airport?

9. A rescue team 1000 feet away from the base of a vertical cliff measures the angle of elevation to the top of the cliff to be 70°. A climber is stranded on a ledge. The angle of elevation from the rescue team to the ledge is 55°. How far is the stranded climber from the top of the cliff?

NO CALCULATOR FOR THE REMAINDER OF THE REVIEW!!!!!!!

10. Suppose θ is an angle in standard position whose terminal side passes through the point (-8,15). Find each of the following: (Leave answers as fractions!)

a. $\sin \theta$ = _____

b. $\cos \theta$ = _____

c. $\tan \theta$ = _____

d. $\csc \theta$ = _____

e. $\sec \theta$ = _____

f. $\cot \theta$ = _____

11. Find the values of the six trigonometric functions if $\sec \theta = \dfrac{6}{5}$ and $\tan \theta < 0$.

a. $\cos \theta =$ _____

b. $\sin \theta =$ _____   d. $\csc \theta =$ _____

c. $\tan \theta =$ _____   e. $\cot \theta =$ _____

12. Suppose $\cos \theta = -\dfrac{4}{5}$ and θ is in Quadrant III. Find all of the following and leave answers in fraction form.

                                              c. $\sec \theta =$ _____

a. $\sin \theta =$ _____   d. $\csc \theta =$ _____

b. $\tan \theta =$ _____   e. $\cot \theta =$ _____

13. Find the exact value of each of the following. Simplify and rationalize your denominators.

a. $\sin 225° =$ b. $\sin\left(\dfrac{7\pi}{4}\right) =$

c. $\sec\left(\dfrac{\pi}{6}\right) =$ d. $\tan 90°$

e. $\sec\left(\dfrac{17\pi}{3}\right) =$ f. $\csc\left(\dfrac{3\pi}{4}\right)$

h. $\cos\left(\dfrac{7\pi}{3}\right) =$ j. $\cot 150° =$

14. Change the following angle measure to radian measure: (leave answer in terms of π)

     a. $\theta = 240°$ b. $\theta = -108°$

15. Change the following angle to degree measure: (Round to the nearest thousandth)

     a. $\theta = -\dfrac{7\pi}{6}$ b. $\theta = \dfrac{5\pi}{7}$