


APPC Lesson 6.2 Homework

Name _____

1. The radius of a circle is 5 centimeters. A central angle of the circle has an arc length of 20 centimeters. What is the measure of the central angle, in radians?

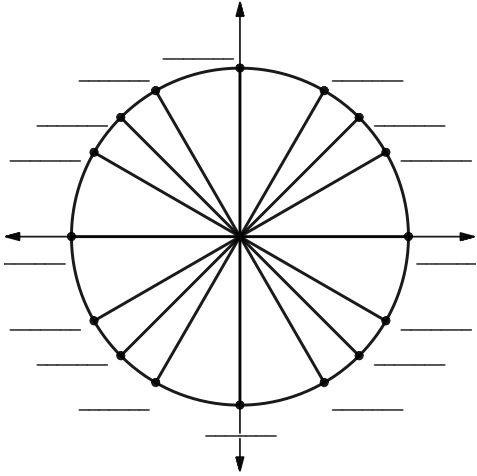
2. Consider a circle O with radius r . How many arcs of length r are equal to the length of the following arcs?
 - a. a semicircle of circle O

 - b. an arc that is three-quarters of circle O

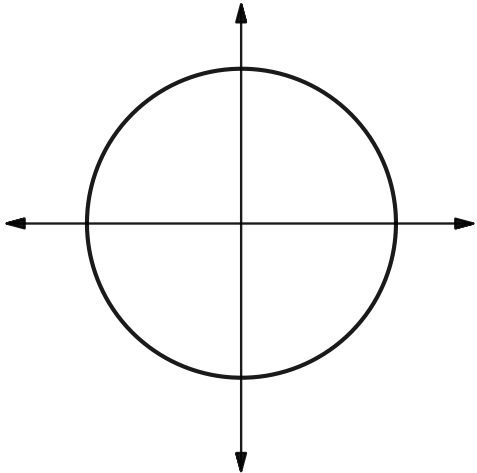
-  3. An angle in standard position has a measure of 5.8 radians. In which quadrant is the terminal side of the angle?

4. An angle in standard position has a measure of $\frac{11\pi}{6}$ radians. Find the radian measures of three angles coterminal with this angle.

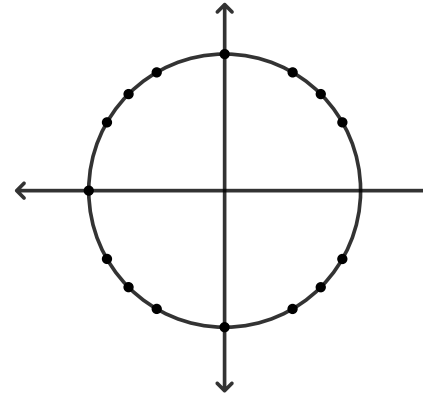
5. Fill in the blanks with the radian measures of the angles represented on the unit circle.



6. An angle in standard position has a measure of $\frac{3\pi}{5}$ radians. The point where the terminal ray of the angle intersects the circle is Point A . Approximate the location of Point A and explain your method.



7. The points shown represent multiples of $\frac{\pi}{6}$ or $\frac{\pi}{4}$.
- An angle in standard position has a measure of $-\frac{\pi}{4}$ radians. Label a point S , where the terminal ray of the angle intersects the circle.
 - An angle in standard position has a measure of $-\frac{22\pi}{3}$ radians. Label a point T , where the terminal ray of the angle intersects the circle.



8. Use the figure shown to answer the following questions.

- Find the circumference of the circle.
- If the length of \widehat{DC} is 6π , find the measure of θ , in radians. Give an exact answer.

