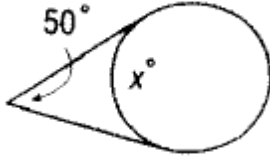


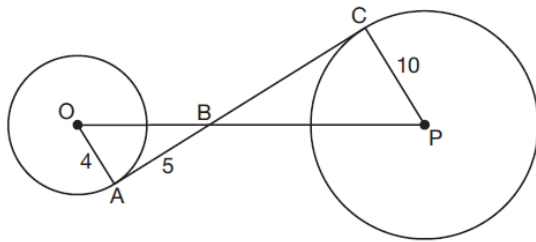
Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Class: \_\_\_\_\_

Geometry  
 Unit 10  
 PS

1) [3] Find x

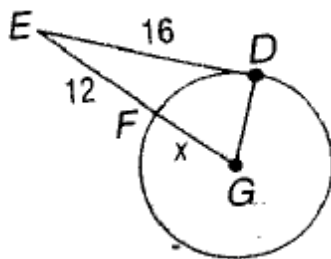


2) [3] In the diagram shown below,  $\overline{AC}$  is tangent to circle  $O$  at  $A$  and to circle  $P$  at  $C$ ,  $\overline{OP}$  intersects  $\overline{AC}$  at  $B$ ,  $OA = 4$ ,  $AB = 5$ , and  $PC = 10$ .

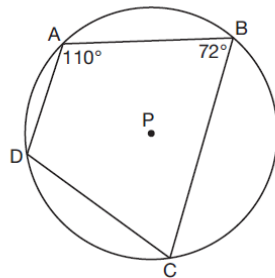


Find BP to the nearest tenth

3) [3]  $\odot G$  and  $\overline{ED}$  is a tangent – Find x

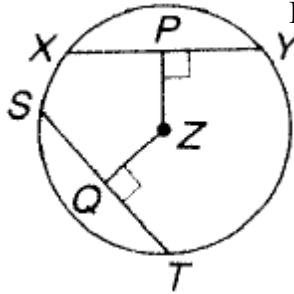


4) [3] In the diagram below, quadrilateral  $ABCD$  is inscribed in circle  $P$ .



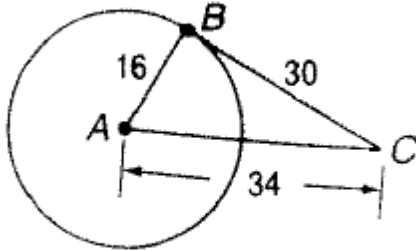
Find and explain  $m\angle BCD$

5) [2]



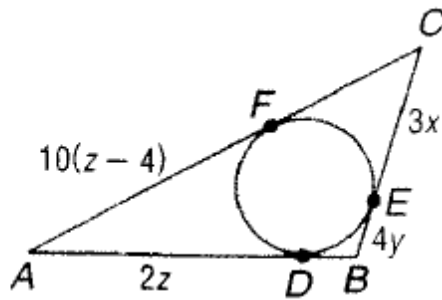
If  $PZ = 10\text{ft}$  and  $ZQ = 11\text{ft}$  which chord is shorter and why?

6) [2]



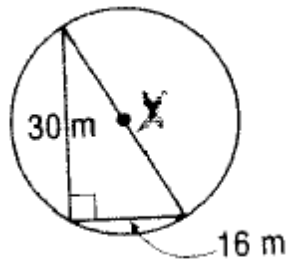
In  $\odot A$  is  $\overline{BC}$  a tangent

7) [2]



Find  $x$ ,  $y$ , and  $z$  if  $AC = 25$  and  $AB = 18$

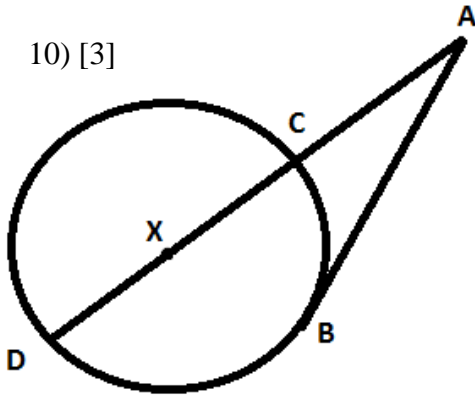
8) [3]



$\odot X$ , find the circumference

9) [2] Write the equation of a circle that has center  $\left(\frac{1}{2}, -\frac{3}{4}\right)$  and diameter 10ft

10) [3]



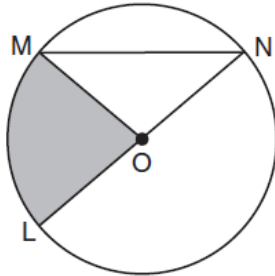
In circle X,  $AB = 3x + 1$ ,  $AC = x + 3$ , and  $XC = 2x + 2$ . Find CD.

11) [2] Using the diagram for #10 if  $\widehat{CB} : \widehat{CD} : \widehat{BD} = 3 : 5 : 7$  find  $m\angle A$

12) [2] The center of circle Q has coordinates  $(3, -2)$ . If circle Q passes through  $R(7, 1)$ , what is the length of its diameter?

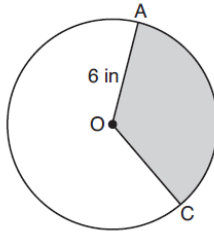
13) [3] The equation of a circle is  $x^2 + y^2 + 6y = 7$ . What are the coordinates of the center and the length of the radius of the circle?

14) [3] In the diagram below of circle O, the area of the shaded sector LOM is  $2\pi \text{ cm}^2$ .



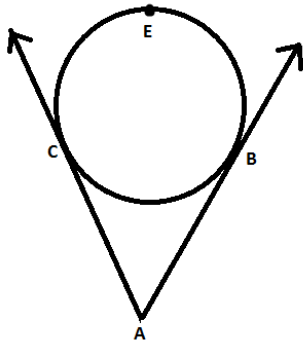
If  $ON = 6\text{cm}$ , find  $m\angle M$

- 15) [3] In the diagram below of circle  $O$ , the area of the shaded sector  $AOC$  is  $12\pi \text{ in}^2$  and the length of  $\overline{OA}$  is 6 inches. Determine and state  $m\angle AOC$ .



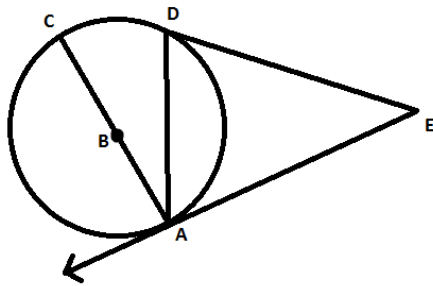
- 16) [2] A designer needs to create perfectly circular necklaces. The necklaces each need to have a radius of 10 cm. What is the largest number of necklaces that can be made from 1000 cm of wire?

- 17) [5]



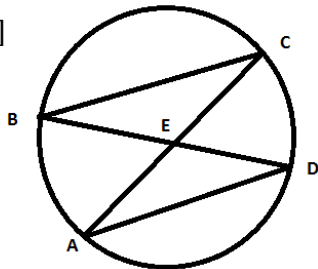
$AB = 2x^2 - 3x + 9$  and  $AC = 8x - 3$ .  
Find  $CB$  to the nearest integer if  $m\widehat{CB} = 110^\circ$

- 18) [3]



Segment  $EA$  is a tangent,  $B$  is the center of the circle.  
 $m\angle CAD = 5x + 1$  and  $m\angle DAE = 8x - 2$ .  
Find  $m\angle ADE$  (Segment  $ED$  is not necessarily a tangent).

- 19) [3]



$E$  is the center of the circle,  $m\angle BEC = 125^\circ$   
If  $BD = 40\text{ft}$ , find the length of arc  $CD$