Geometry Name _____

Per. ____ Date _____

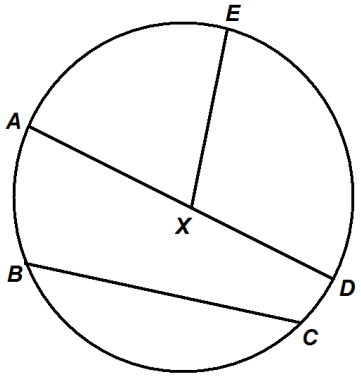
Unit 12 Circles Review Packet

Unless otherwise directed, please round all answers to the nearest tenth place.

Directions: In the box provided next to each target section, put an (S) if you were able to complete the section by *yourSELF*, an (H) if you received a *minimal* amount of *HELP* from me, a classmate, or another source, or a (D) if you felt the section was *DIFFICULT* and required you to get *a lot* of help. This will help provide you by giving you feedback as to what topics you should be focusing on as you prepare for the test.

TARGET A – Parts of a Circle

For #1 – 4, use the picture below to answer the following questions about $\odot X$



1) Name the center of the circle_____

2) Name 3 radii _____, _____, _____

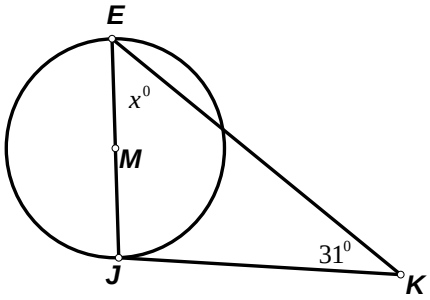
3) Name the diameter_____

4) Name a chord that is not a diameter_____

TARGET B – Tangents

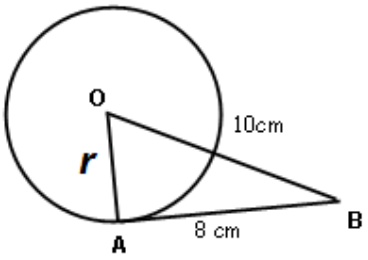
5) $\overline{KJ}$ is tangent to circle M at J (not drawn to scale).

Find the value of x.



x = _____

6) $\overline{BA}$ is tangent to circle O at B. Find the measure of the radius if $\overline{BO} = 10\ cm$



r = _____

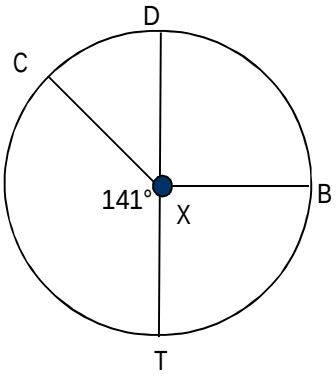
TARGET C – Angles and Arcs

7) Find the measure of each arc in circle X. $m\angle DXB = 90^\circ$

a. $m\overset{\frown}{TC}$ _____ b. $m\overset{\frown}{TBD}$ _____

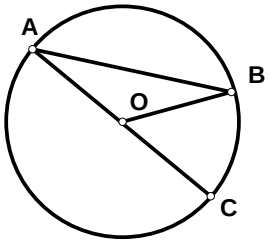
c. $m\overset{\frown}{BTC}$ _____ d. $m\overset{\frown}{CD}$ _____

e. $m\overset{\frown}{CBD}$ _____ f. $m\overset{\frown}{TCD}$ _____



TARGET D – Inscribed Angles and Arcs

8) In circle O, $m\overset{\frown}{BA} = 120^o$. Find $m\angle A$.



$m\angle A$= _____

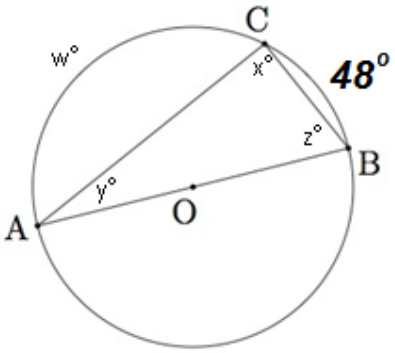
Use the diagram for 9 through 12 A child's toy is designed with a **triangle** inscribed in a circle. $\overline{BA}$ is a diameter. Find each variable.

9) x^o = _____

10) y^o =_____

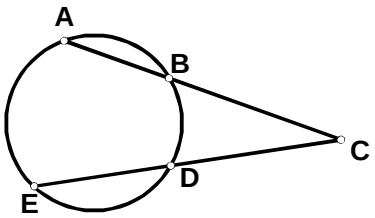
11) z^o = _____

12) w^o = _____



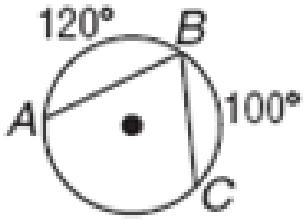
TARGET E – Angles formed by Chords, Secants and Tangents

13) If $m\overset{\frown}{AE} = 120$ and $m\overset{\frown}{BD} = 62$, find $m\angle C$.

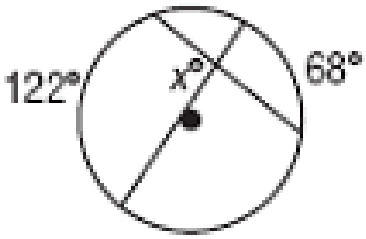


$m\angle C =$ _____

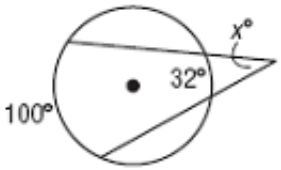
14) Find $m\angle ABC$



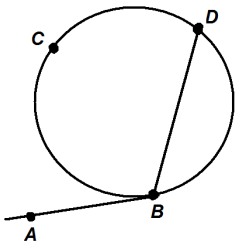
15) Find the value of x



16) Find the value of x



17) If $m\overset{\frown}{BD} = 136^\circ$, find $m\angle ABD$



TARGET F – Equations of a Circle

For #18 – 20, find the center and radius of each circle.

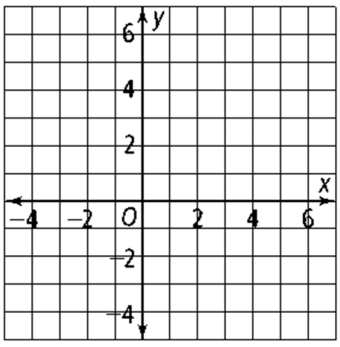
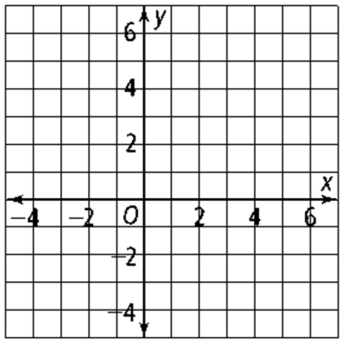
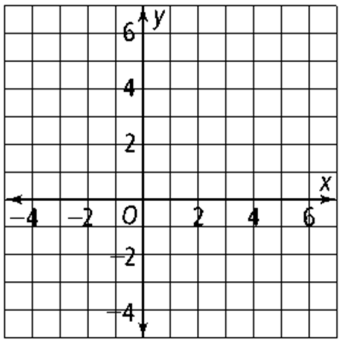
18) $x^2 + y^2 = 36$ **19)** $(x - 2)^2 + (y - 7)^2 = 49$ **20)** $(x + 1)^2 + (y + 6)^2 = 16$

For #21 – 23, write the equation of the circle with the given center and radius.

21) center (0, 0); $r = 7$ **22)** center (4, 3); $r = 8$ **23)** center (5, 3); $r = 2$

For #24-36, find the center and the radius. Then graph the circle.

24) $x^2 + y^2 = 25$ **25)** $(x - 3)^2 + (y - 4)^2 = 9$ **26)** $(x + 2)^2 + (y + 4)^2 = 1$

center_____ center_____ center_____

radius_____ radius_____ radius_____