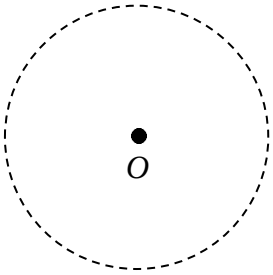
Geometry CC – Mr. Valentino
Unit 12 Day 3: Circle Vocabulary

Name: _____
Date: _____ Per: _____

Aim: How can I define and understand the different circle vocabulary?

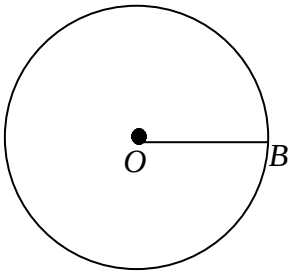
New Vocabulary: Circle, radius, diameter, chord, secant, tangent, major arc, minor arc, semicircle, central angle.

1) A _____ is a set of points in a plane that are **equidistant** from a fixed point (the center).



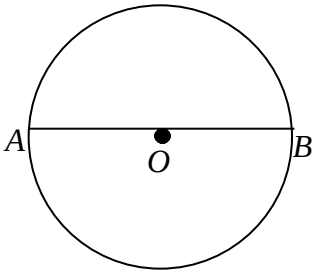
A circle is usually named after its **center**. We usually use the letter O to represent the circle's center.

2) Segment $\overline{OB}$ starts at the **center**, and ends at **a point on the circle**.



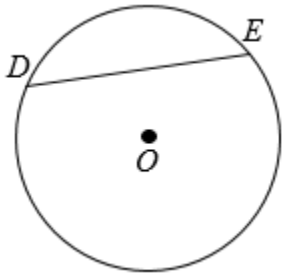
$\overline{OB}$ Is called a _____.

3) Segment $\overline{AB}$ starts at **a point on the circle**, and ends at **another point on the circle**, and it **passes through the center**.



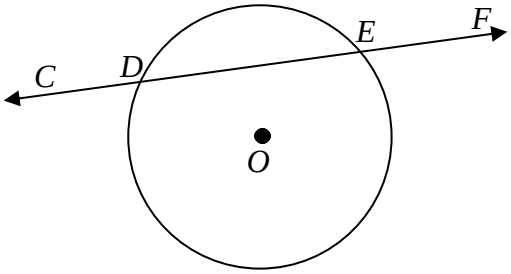
$\overline{AB}$ is called a _____.

4) Segment $\overline{DE}$ starts at **a point on the circle**, and ends at **another point on the circle**.



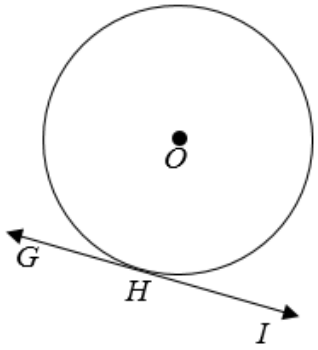
$\overline{DE}$ is called a _____.

5) $\overline{CF}$ is the **whole line, or line segment** that **contains a chord** and intersects the circle twice.



$\overline{CF}$ is called a _____.

6) $\overline{GI}$ is a line, or line segment that **intersects the circle at exactly one point**. It doesn't enter the circle.



$\overline{GI}$ is called a _____.

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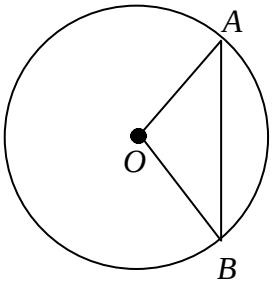
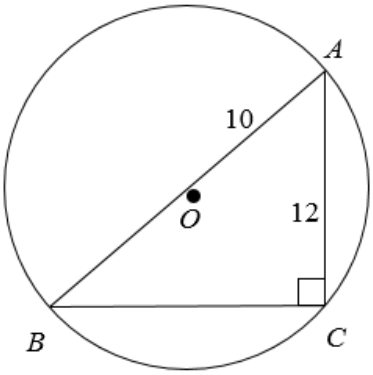
7) Is ΔAOB isosceles? Explain.



8) Find the length of $\overline{BC}$.



Sketch each of the following:

9) Circle *O* with radius $\overline{OM}$, and diameter $\overline{NM}$

10) Circle *O* with radius $\overline{OA}$, and chord $\overline{AD}$

11) Circle *M* with diameters $\overline{AB}$ and $\overline{CD}$

12) Circle *W* with chords $\overline{GH}$ and $\overline{XY}$

13) Circle *O* with chords $\overline{AEB}$ and $\overline{CED}$

14) Circle *K* with tangent $\overline{AB}$

15) Circle *O* with external point *P*, and tangents $\overline{AP}$ and $\overline{BP}$

16) Circle *O* with external point *P*, and secants $\overline{AP}$ and $\overline{BP}$

17) Circle *O* with external point *P*, tangent $\overline{AP}$, and secant $\overline{BP}$

18) Circle *W* with diameter $\overline{AB}$, and secant $\overline{BX}$

19) A _____ angle of a circle is an angle whose **vertex is the center of the circle**.

20) The **measure of an arc** is equal to the **measure of the central angle that intercepts the arc.**

21) A _____ arc measures **less than 180 degrees**.

22) A _____ arc measures **more than 180 degrees**. We usually name them with 3 letters.

23) Chords $\overline{AB}$ and $\overleftrightarrow{CD}$ intersect at *O*, the center of the circle, and $m\angle AOC = 25°$. Find each of the following:

a] $m\angle COB$

b] $m\angle BOD$

c] $m\angle DOA$

d] $m\overset{\frown}{AC}$

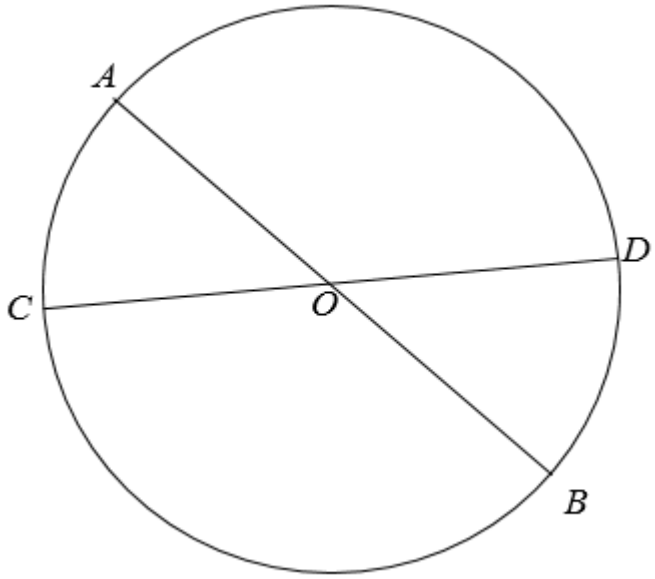
e] $m\overset{\frown}{BC}$

f] $m\overset{\frown}{BD}$

g] $m\overset{\frown}{AB}$

h] $m\overset{\frown}{ACD}$

i] $m\overset{\frown}{CBA}$



24) In circle *O*, $m\angle POQ = 100°$, $m\angle ROS = 40°$, and $\angle POR \cong \angle QOS$. Find each of the following:

a] $m\overset{\frown}{PQ}$

b] $m\overset{\frown}{RS}$

c] $m\angle QOS$

d] $m\overset{\frown}{SQ}$

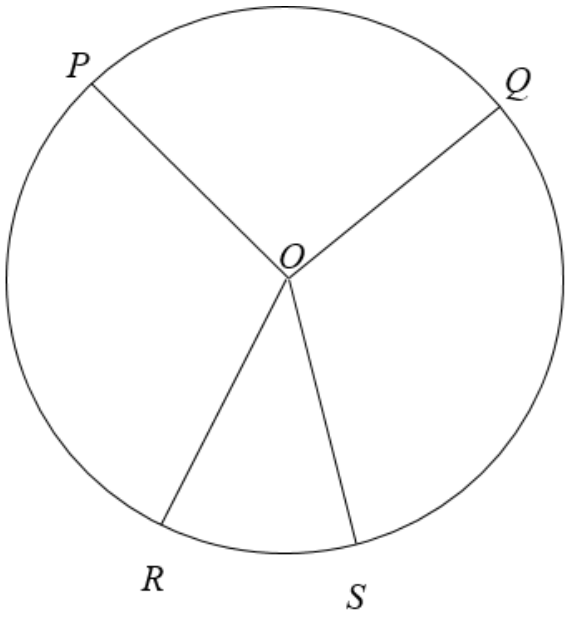
e] $m\overset{\frown}{RQ}$

f] $m\overset{\frown}{QPS}$

g] $m\angle QOR$

h] $m\overset{\frown}{QR}$

i] $m\overset{\frown}{QPR}$



25) In circle *O*, $\angle AOC$ and $\angle COB$ are supplementary. If $m\angle AOC = 2x$, $m\angle COB = x + 90$, and $m\angle AOD = 3x + 20$, find each of the following:

a] x

b] $m\angle AOC$

c] $m\angle COB$

d] $m\angle AOD$

e] $m\angle DOB$

f] $m\overset{\frown}{AC}$

g] $m\overset{\frown}{BC}$

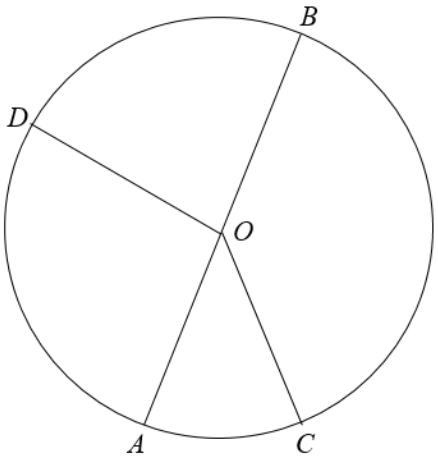
h] $m\overset{\frown}{AB}$

i] $m\overset{\frown}{AD}$

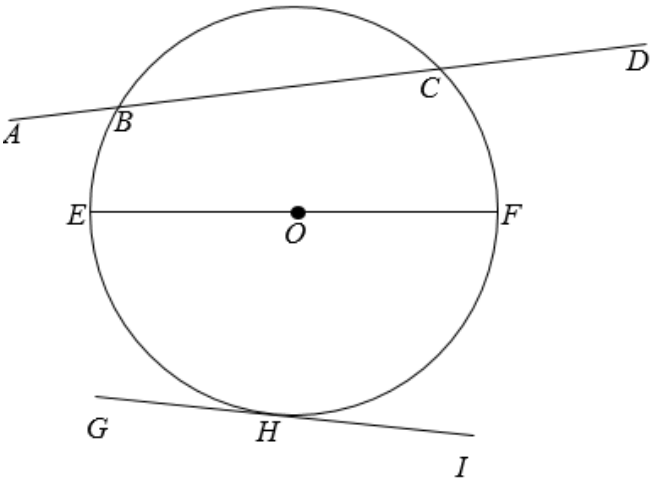
j] $m\overset{\frown}{DB}$

k] $m\overset{\frown}{ADC}$

l] $m\overset{\frown}{BCD}$



26)



1) $\overline{EO}$ is called a _____.

2) $\overline{OF}$ is called a _____.

3) $\overline{EF}$ is called a _____.

4) $\overline{GI}$ is called a _____.

5) $\overline{BC}$ is called a _____.

6) $\overline{AD}$ is called a _____.

27) True or false: Every diameter is also a chord.

28) True or false: Every chord is also a diameter.