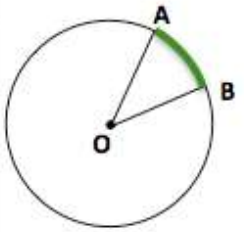
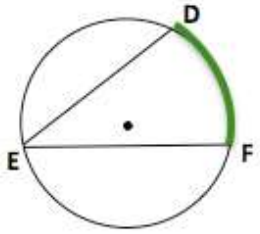
Circles: Angles and Arcs



$\angle O$ is a **central angle**.

$\angle O$ intercepts $\overset{\frown}{AB}$ ("arc AB")

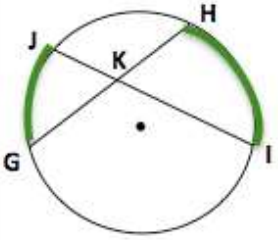
A central angle is formed by two radii.



$\angle E$ is an **inscribed angle**.

$\angle E$ intercepts $\overset{\frown}{DF}$ ("arc DF")

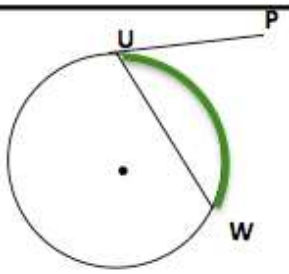
An inscribed angle is formed by two chords meeting at common point on the circle.



$\angle HKI$ & $\angle JKG$ are **chord-chord angles**.

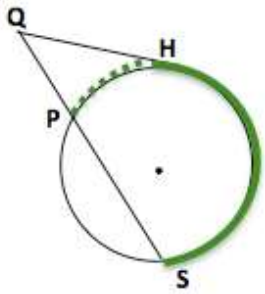
$\angle HKI$ intercepts $\overset{\frown}{HI}$

$\angle JKG$ intercepts $\overset{\frown}{JG}$



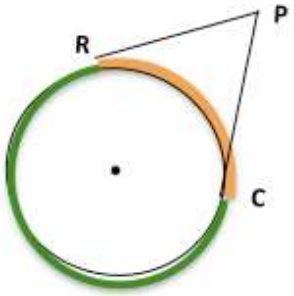
$\angle U$ is a **tan-chord angle**.

$\angle U$ intercepts $\overset{\frown}{UW}$



$\angle Q$ is a **tan-secant angle**.

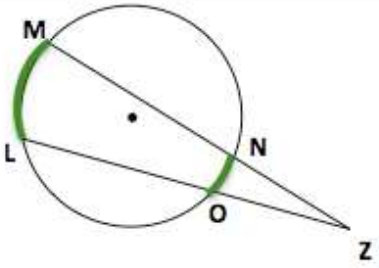
$\angle Q$ intercepts $\overset{\frown}{HS}$ and $\overset{\frown}{PH}$



$\angle P$ is a **tan-tan angle**.

$\angle P$ intercepts **major** $\overset{\frown}{RC}$

$\angle P$ intercepts **minor** $\overset{\frown}{RC}$



$\angle Z$ is a **secant-secant angle**.

$\angle Z$ intercepts $\overset{\frown}{NO}$ and $\overset{\frown}{ML}$

Write whether the angle is central, inscribed, chord-chord, secant-secant, tan-tan, tan-chord or tan-secant.

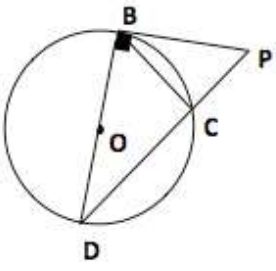
$\angle P$ _____

$\angle D$ _____

$\angle PBC$ _____

$\angle BCD$ _____

$\angle CBD$ _____



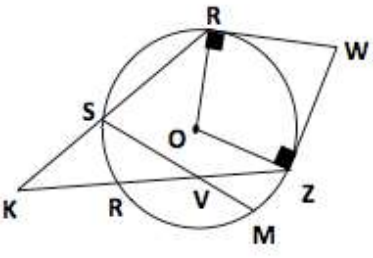
6. $\angle O$ _____

7. $\angle K$ _____

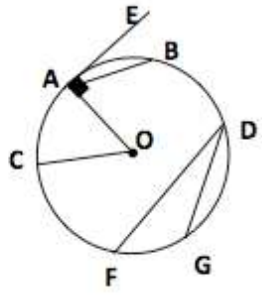
8. $\angle W$ _____

9. $\angle RVM$ _____

10. $\angle ZVM$ _____

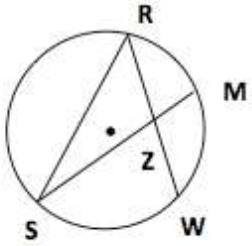


A Write the type of circle angle each angle represents. Also, determine the intercepted arc.



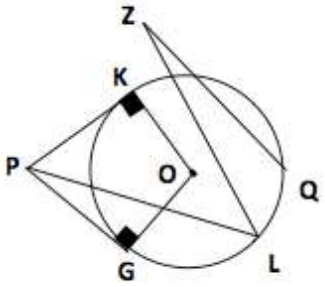
	Angle	Circle Angle Type	Intercepted Arc
1)	$\angle AOC$		
2)	$\angle D$		
3)	$\angle EAB$		

B Write the type of circle angle each represents. Also, determine the intercepted arc.



	Angle	Circle Angle Type	Intercepted Arc
1)	$\angle MZW$		
2)	$\angle R$		
3)	$\angle RSM$		

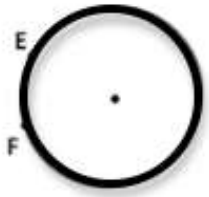
C Write the type of circle angle each represents. Also, determine the intercepted arc or arcs.



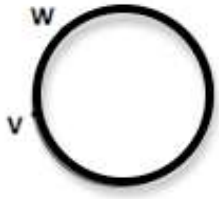
	Angle	Circle Angle Type	Intercepted Arcs
1)	$\angle GPK$		&
2)	$\angle GPL$		&
3)	$\angle Z$		&
4)	$\angle O$		

D Sketch the:

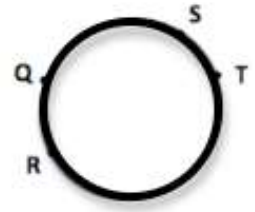
1) central angle intercepting $\overset{\frown}{EF}$



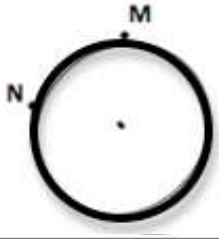
2) inscribed angle intercepting $\overset{\frown}{VW}$



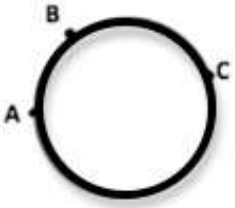
3) chord-chord angle intercepting $\overset{\frown}{QR}$ & $\overset{\frown}{ST}$



4) tan-chord angle intercepting $\overset{\frown}{NM}$



5) tan-secant angle intercepting $\overset{\frown}{AB}$ & $\overset{\frown}{AC}$



E Sketch a:

1) a circle with a central angle and an inscribed angle both intercepting the same arc.

2) a circle with an inscribed angle and a tan-chord angle intercepting the same arc.