March 16 , 2016

Today we will begin Circles and Spheres.

EQ: What are the different parts of a circle?

MCC9-12.G.C.2 Identify and describe relationships among inscribedangles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscibed angles on a diameter are right angles, the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

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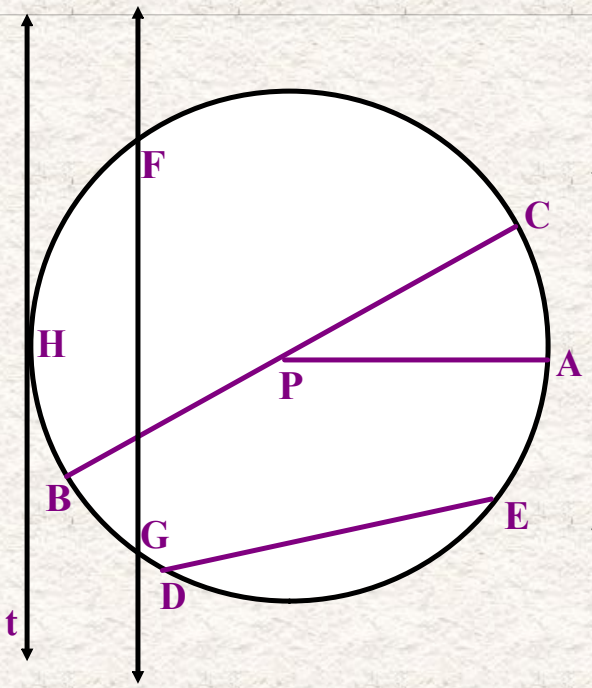
Parts of the Circle



A circle is the set of all points equidistance from a point.

The radius is the distance from a point on the circle to the center.

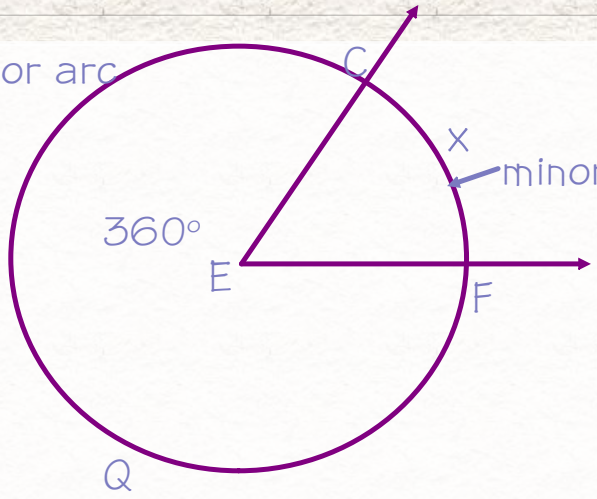
A chord is a line segment whose endpoints lie on a circle.

The diameter is a chord that passes through the center of a circle.

A tangent is a line that intersects a circle at exactly one point.

A secant is a line intersects the circle at exactly two points.

Central Angles



A central angle (<CEF) separates a circle into two arcs.

Minor Arc $\overset{\frown}{(CF)}$
$0° < x < 180°$

Major Arc $\overset{\frown}{(CQF)}$
$x > 180°$

Semicircle
$x = 180°$

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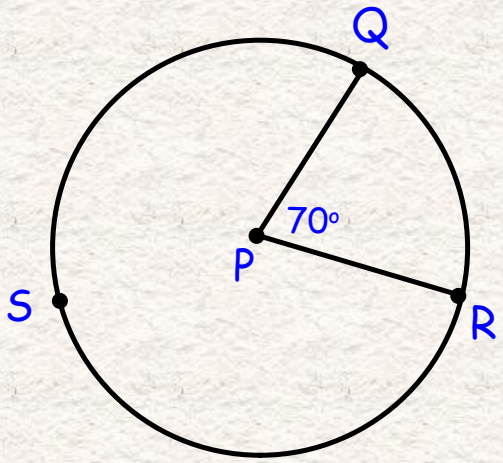
Arcs are measured by their corresponding central angles.

So.....

central angle = corresponding arc.



$\overset{\frown}{QR} = ?$

$\overset{\frown}{QSR} = ?$

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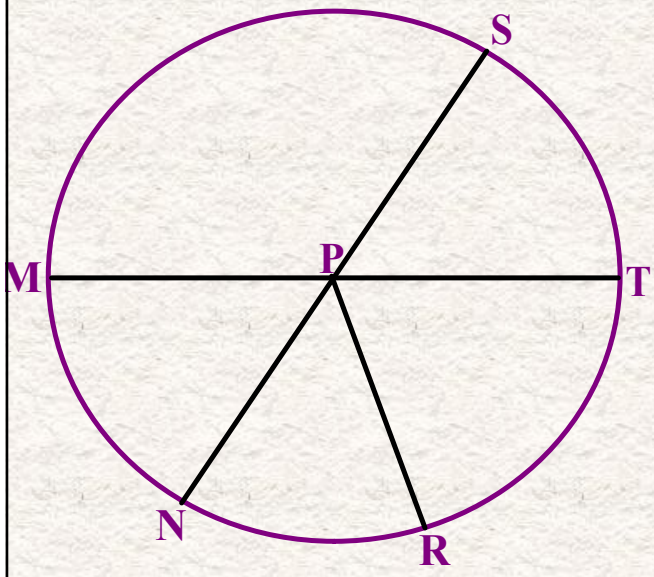
$m\angle SPT = 51^\circ$ $m\angle NPR = 29^\circ$

$\overline{SN}$ and $\overline{MT}$ are diameters



1. $m\overset{\frown}{NR}$
2. $m\overset{\frown}{ST}$
3. $m\angle MPN$
4. $m\overset{\frown}{TSR}$
5. $m\overset{\frown}{MN}$
6. $m\overset{\frown}{MST}$
7. $m\overset{\frown}{NMS}$
8. $m\angle MPS$
9. $m\overset{\frown}{SRN}$
10. $m\overset{\frown}{NTS}$
11. $m\angle TPR$
12. $m\overset{\frown}{RT}$

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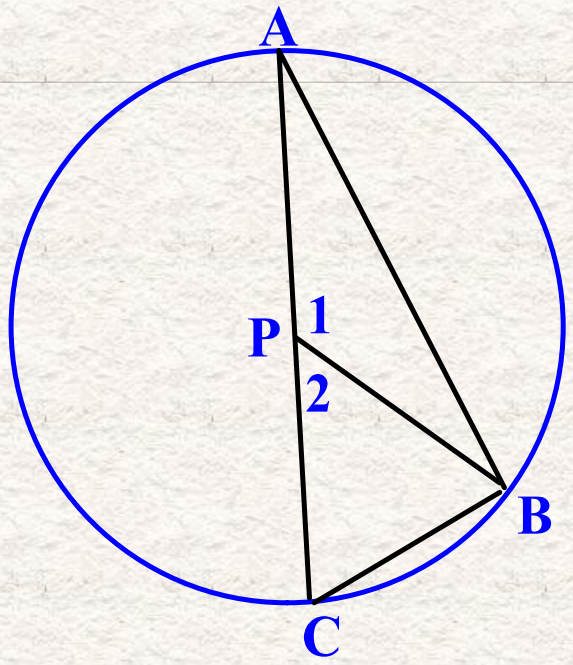
$m\angle 1 = 140°$ and $\overline{AC}$ is a diameter



1. $m\angle 2$
2. $m\overset{\frown}{BC}$
3. $m\overset{\frown}{AB}$
4. $m\overset{\frown}{ABC}$

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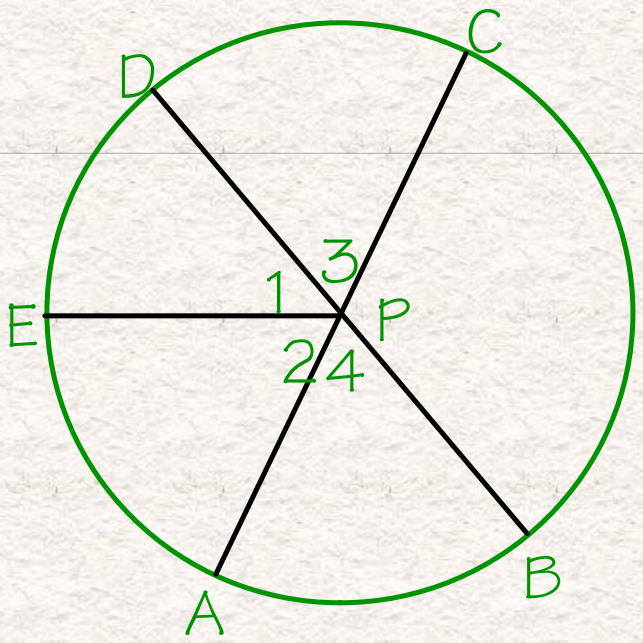

$m\angle 2 = m\angle 1$

$m\angle 2 = (4x + 35)^\circ$

$m\angle 1 = (9x + 5)^\circ$

$\overline{BD}$ and $\overline{AC}$ are diameters.

5. $x =$

6. $m\overset{\frown}{AE}$

7. $m\overset{\frown}{ED}$

8. $m\angle 3$

9. $m\overset{\frown}{AB}$

10. $m\overset{\frown}{EC}$

11. $m\overset{\frown}{EB}$

12. $m\angle CPB$

13. $m\overset{\frown}{CB}$

14. $m\overset{\frown}{CEB}$

15. $m\overset{\frown}{DC}$

16. $m\overset{\frown}{CEA}$

Homework Worksheet

Nov 1-7:32 PM