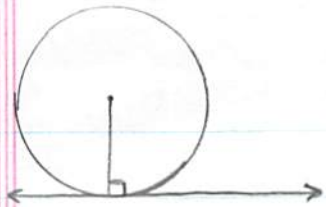

a line is tangent to a circle IFF it is Perpendicular to the Radius

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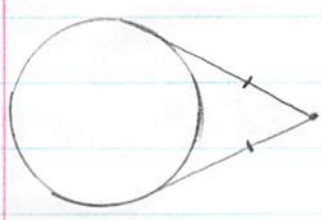
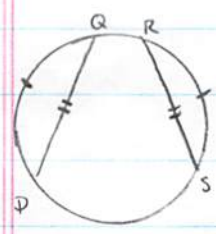


Tangents that share a common external point are congruent



$\overset{\frown}{PQ} \cong \overset{\frown}{RS}$

Two Minor arcs are $\cong$ IFF their Corresponding chords are Congruent

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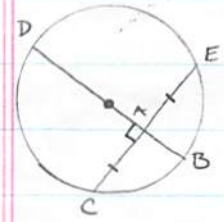
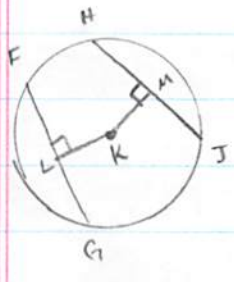


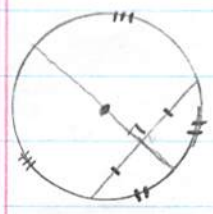
if one chord is a Perpendicular bisector of another then the first Chord is a diameter

if BD is a $\perp$ Bisector of CE then BD is a diameter.

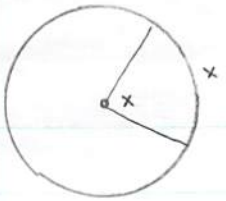


in a Circle or $\cong$ Circles, 2 chords are $\cong$ IFF they are equidistant from the Center

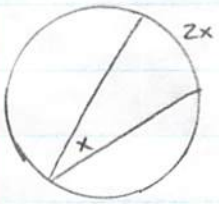
$\overline{FG} \cong \overline{HJ}$ iff $KL = KM$



If the Diameter of a Circle is $\perp$ to a Chord then the Diameter Bisects the Chord and the Arc.



Central angle = the Measure of its intercepted Arc

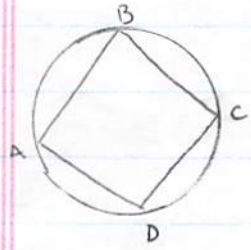


Inscribed angle = ½ Measure of intercepted Arc

$$\text{Inscribed } \measuredangle = \frac{\text{int arc}}{2}$$

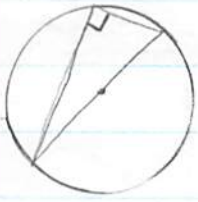
2 inscribed angles that Share the Same intercepted arc are $\cong$

$\measuredangle BAD \cong \measuredangle BCD$



Inscribed Polygons must have opposite $\measuredangle$'s that are Supplementary

$\measuredangle A + \measuredangle C = 180$ $\measuredangle B + \measuredangle D = 180$



if a Rt Triangle is inscribed in a Circle then the hypotenuse is a diameter

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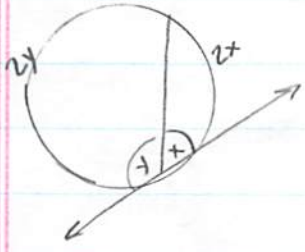
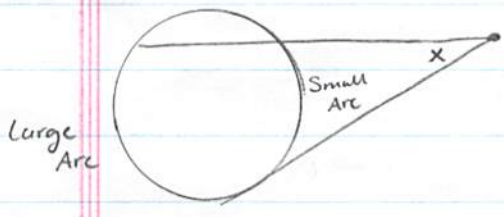


if a Tangent and a Chord intersect on the Circle, then the Measure of the angles formed are ½ the measure of their intercepted Arcs.

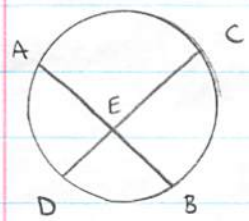
if 2 Chords intersect inside the Circle

$$\frac{\text{arc 1} + \text{arc 2}}{2}$$



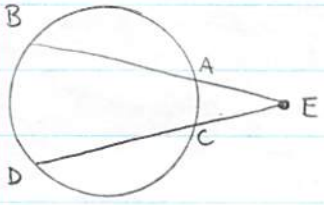
$$x = \frac{\text{Large Arc} - \text{Small Arc}}{2}$$

if a Tangent and a Secant, Two tangents, or 2 Secants Intersect outside a Circle.



if 2 chords intersect inside a Circle

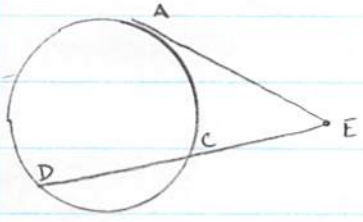
$$EA \cdot EB = EC \cdot ED$$



if 2 Secant Segments Share a common external point.

$$EA \cdot EB = EC \cdot ED$$

Outside Part · Whole = Outside Part · Whole

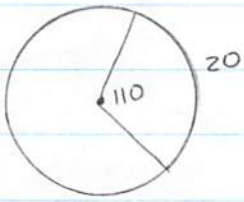


if a Secant and a Tangent Share a Common external Point

$$EA^2 = EC \cdot ED$$

Part · Whole = Outside Part · Whole

Arc Length Corollary



$$\frac{110}{360} = \frac{20}{C}$$

$$110(C) = 7200$$

$$C = 65.45$$

$$\frac{\text{Part}}{\text{Whole}}(\text{degrees}) = \frac{\text{Part}}{\text{Whole}}(\text{Length/Circ.})$$