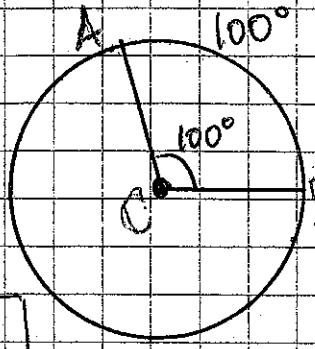
Circle Theorems: Angles

"Where is the Vertex?"

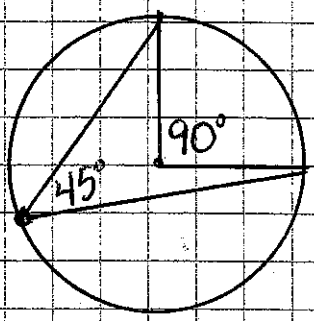
"Center" "ON" "the circle"



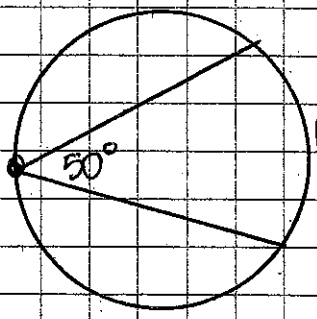
Central ∠

$m\angle ACB = m\overset{\frown}{AB}$

$\angle = arc$

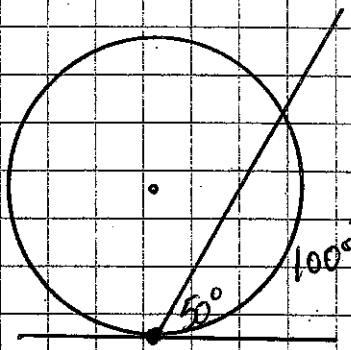


Inscribed ∠ $= \frac{1}{2}$ [central ∠]



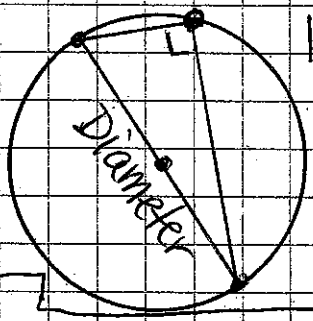
Inscribed ∠

$\angle = \frac{1}{2}\, arc$



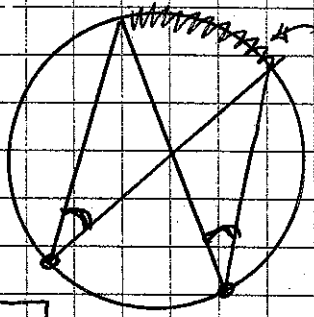
Tangent / Secant

$\angle = \frac{1}{2}\, arc$



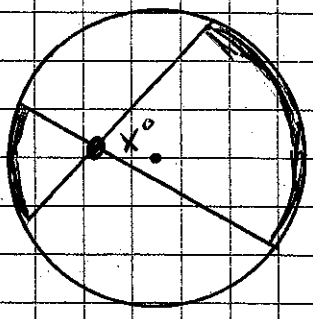
Inscribed / Diameter

$90°$



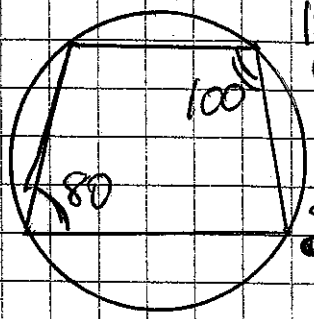
$\cong$ inscribed angles

"IN" "the circle"



∠X

$\angle = \frac{1}{2}(arc + arc)$

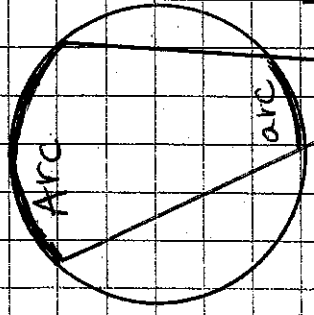


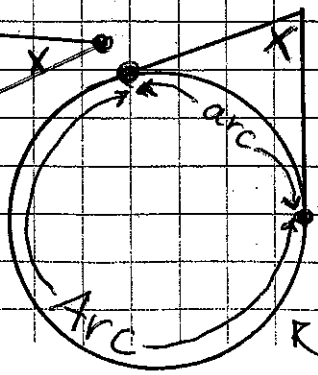
Inscribed Quadrilateral

Opp. ∠'s **Supplementary**

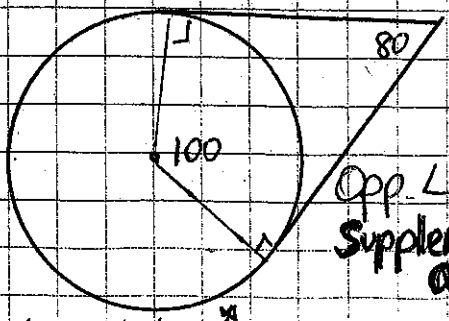
$\angle = \frac{1}{2}(Arc - arc)$

"OUT" of the circle





OR

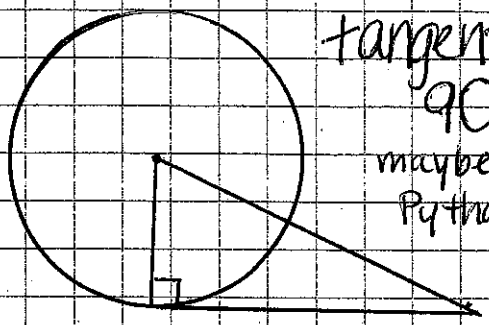


two tangents

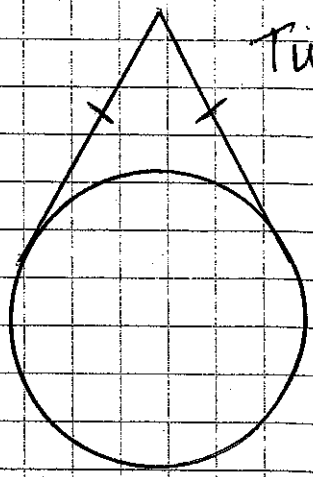
Opp. ∠'s **Supplementary**

Circle Theorems: Segments

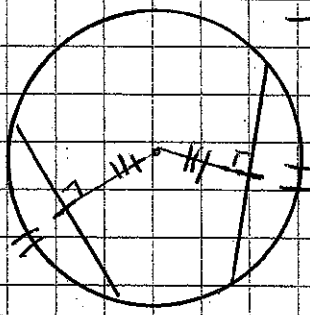
(as in lengths of "Line Segments")



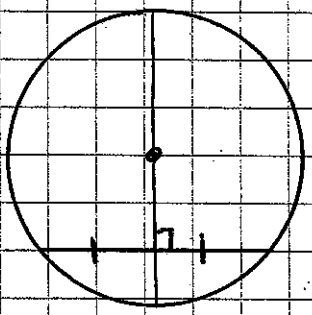
tangents
90° to radius
maybe
Pythag. Th.



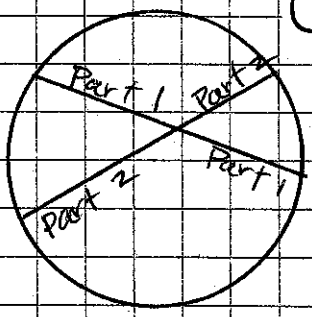
Two Tangents
≅
"Party Hat"



≅ chords
• ≅ arcs
• equidistant from center

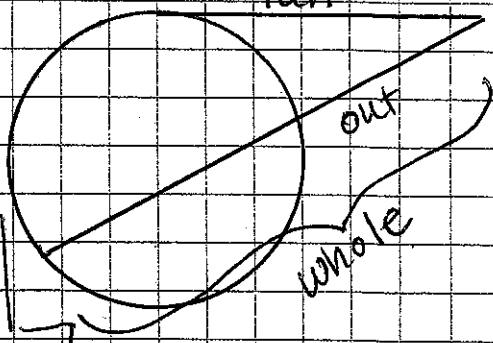


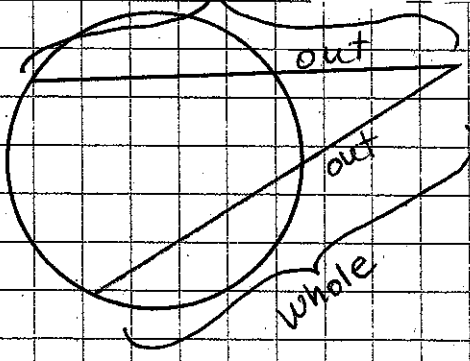
If chord is ⊥ to radius, then it is bisected



Chord-Chord
$P_1P_1 = P_2P$

Tangent & Secant
$\tan^2$





Secant-Secant
$O \cdot W = O \cdot W$

$O \cdot W = \tan^2$