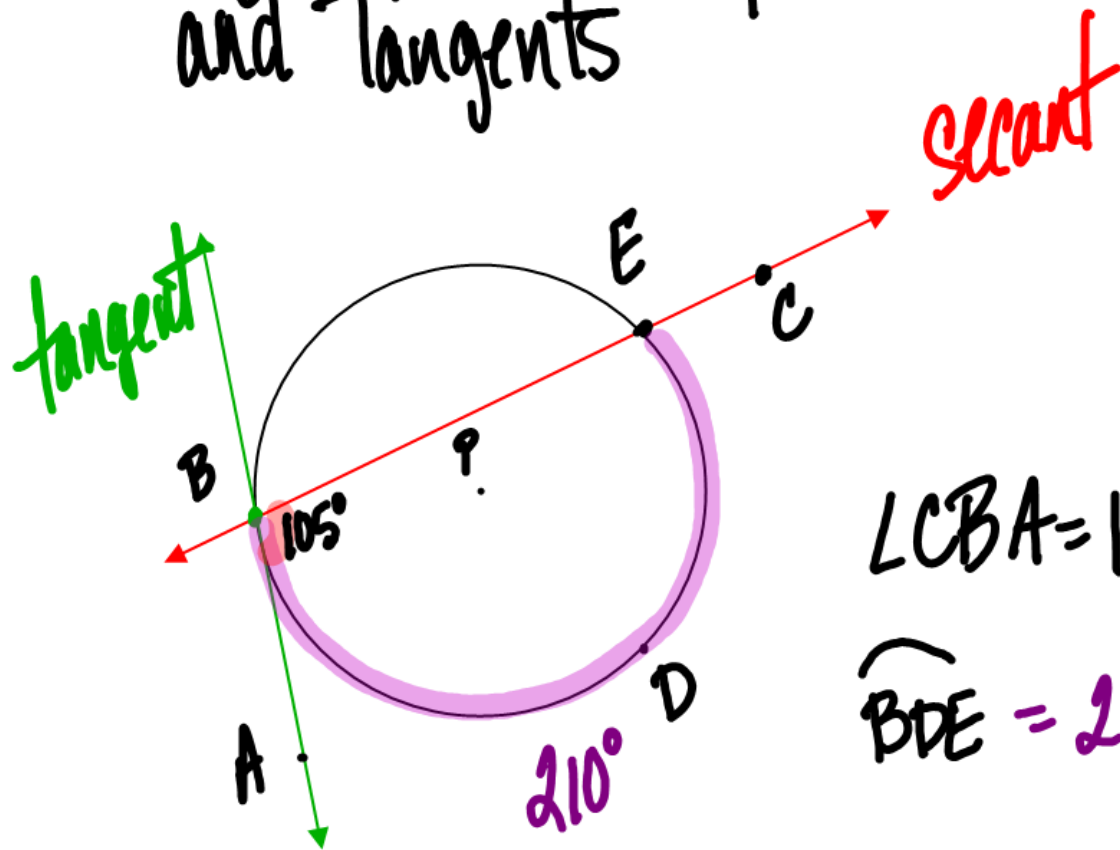


9.4 Angles Formed by Secants and Tangents



$$\angle CBA = 105^\circ$$

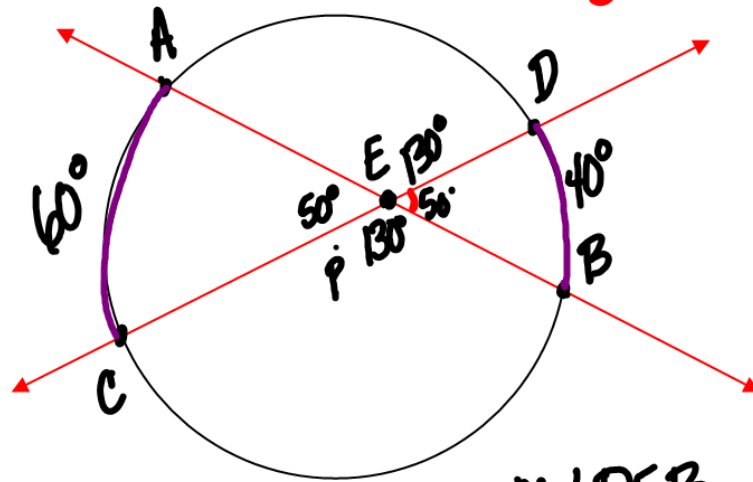
$$\widehat{BDE} = 210^\circ$$

Vertex L on circle

$$m\angle CBA = \frac{1}{2} m \widehat{BDE}$$

2 Secants intersecting inside the circle.

2 chords



Vertical \angle s \cong

$$m\angle DEB = 50^\circ$$

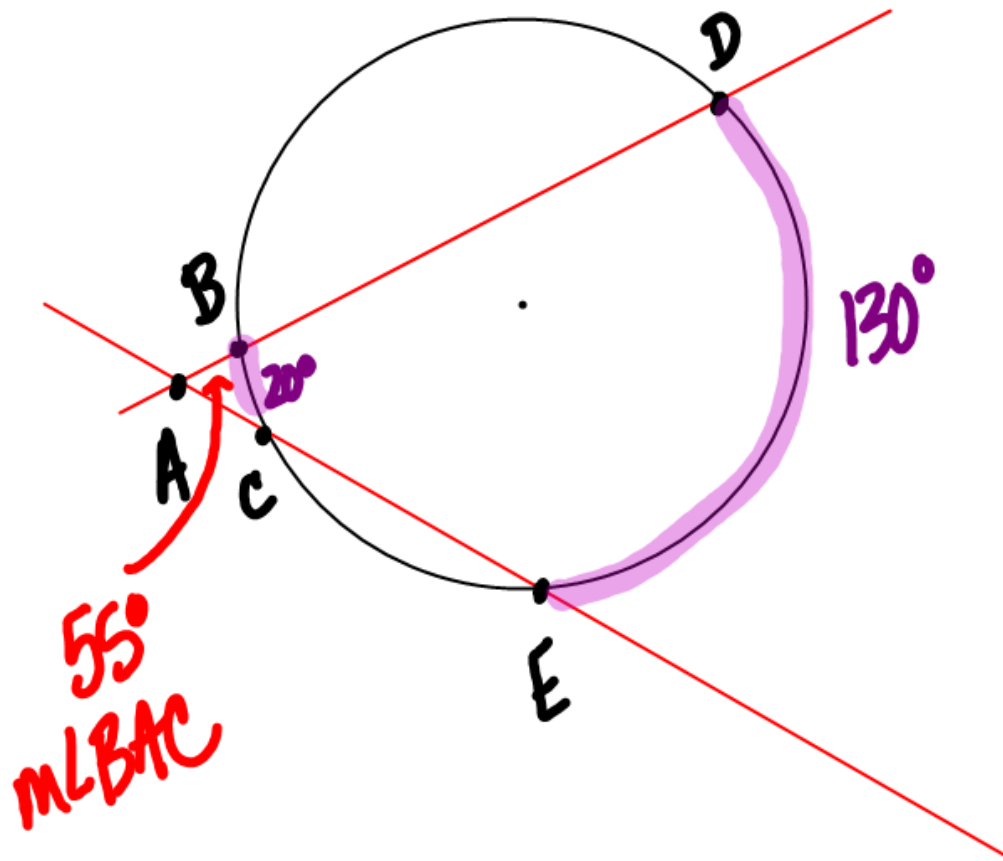
$$\widehat{BD} \quad \widehat{AC}$$

40° 60°

$$\frac{40 + 60}{2} = 50^\circ$$

m \angle half sum arcs

Two Secants intersect outside the circle



$$130 - 20$$

$$\frac{110}{2} = 55^\circ$$

$m\angle = \text{half of difference arcs}$

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a) $m\angle AXC = 75^\circ$
Vertex on circle

b) $m\angle AXC = \frac{80 + 40}{2} = 60^\circ$
Vertex interior

c) $m\angle AXC = \frac{86 - 20}{2} = 33^\circ$
Vertex exterior

