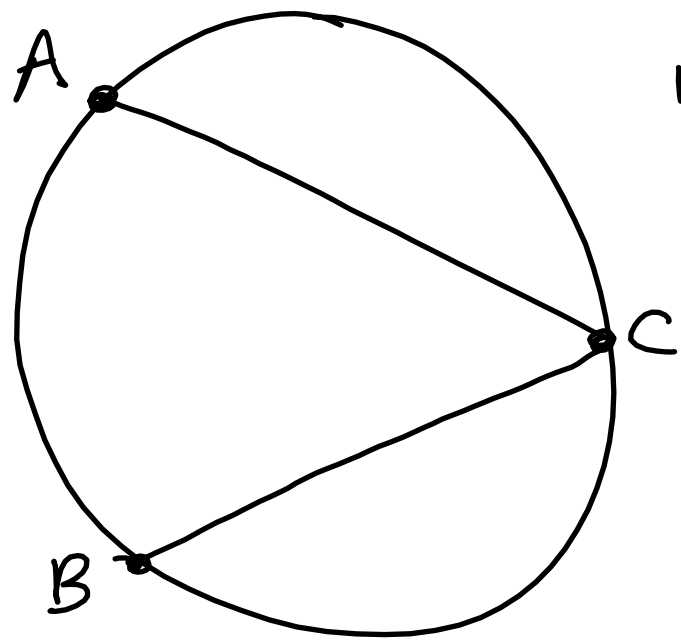
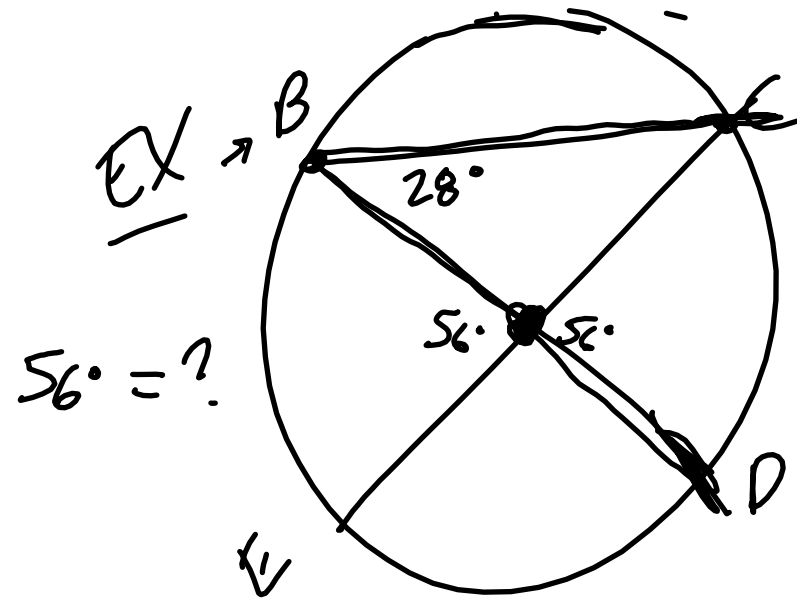


Circles

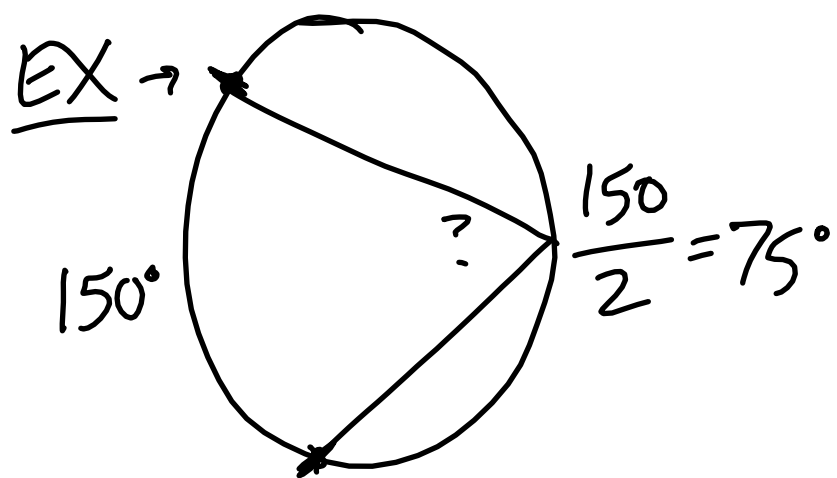
- Inscribed Angles



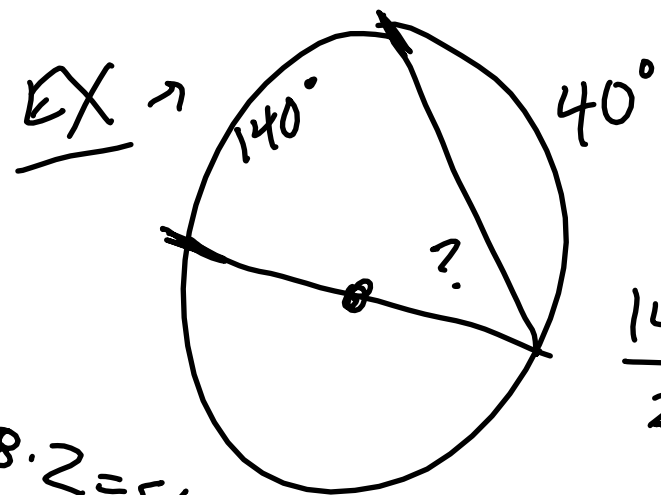
$$m\widehat{AB} = 2 \cdot m\angle C$$



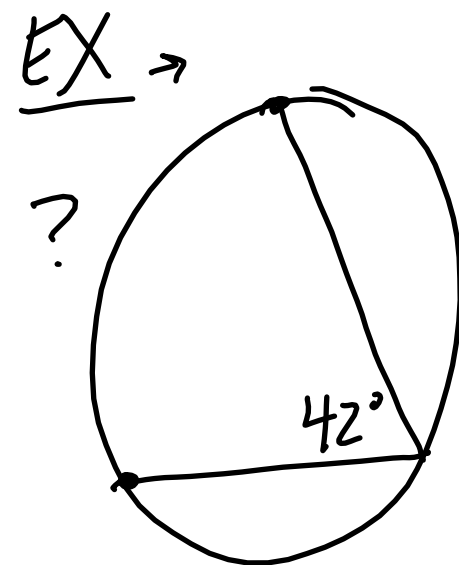
$$28 \cdot 2 = 56$$



$$\frac{150}{2} = 75^\circ$$

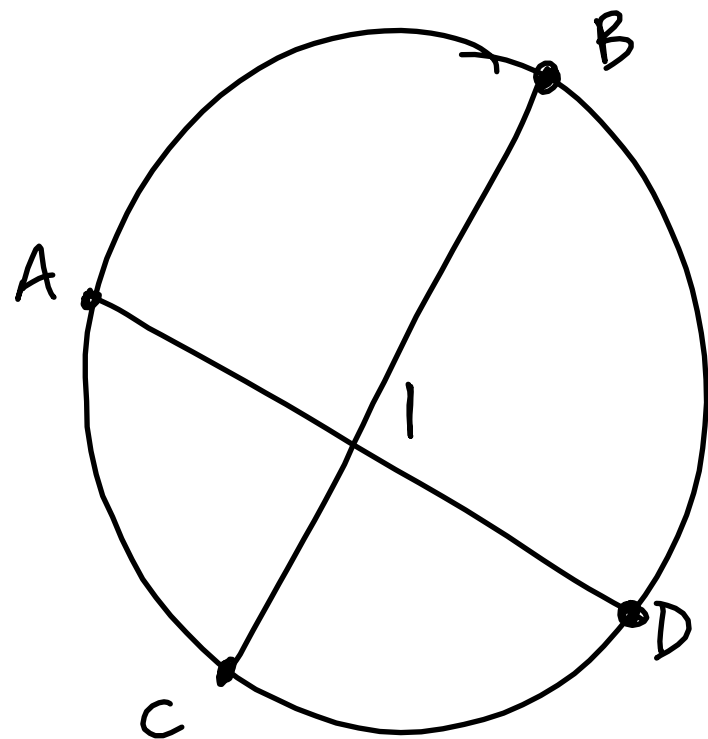


$$\frac{140}{2} = 70^\circ$$



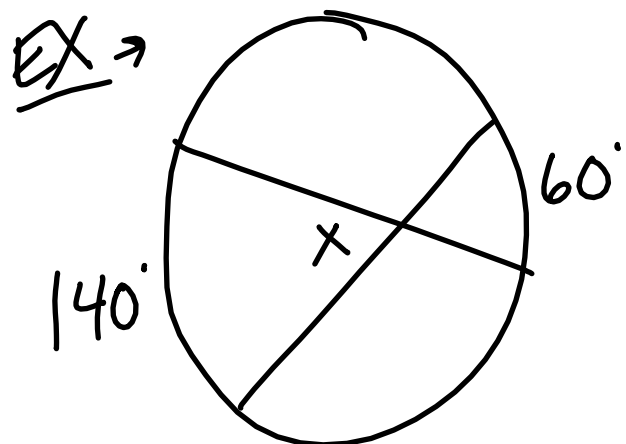
$$42 \cdot 2 = 84^\circ$$

Inside Circle



$$m\angle I = \frac{1}{2} (m\widehat{AC} + m\widehat{BD})$$

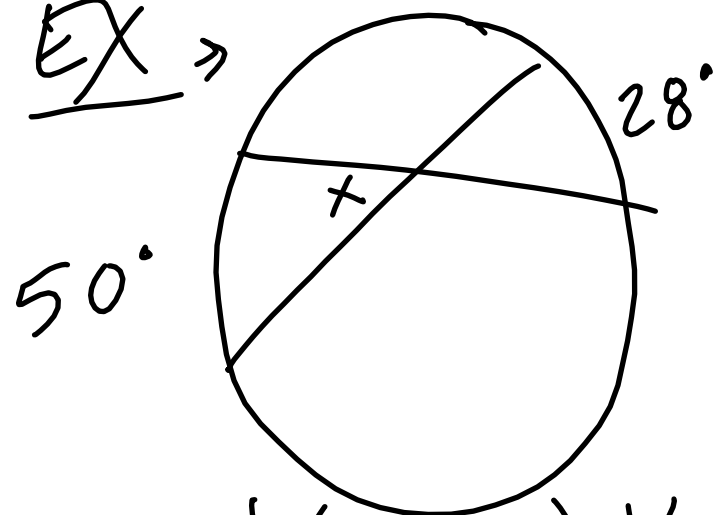
EX →



$$X = \frac{1}{2} (140 + 60)$$

$$X = \frac{1}{2} (200) = 100^\circ$$

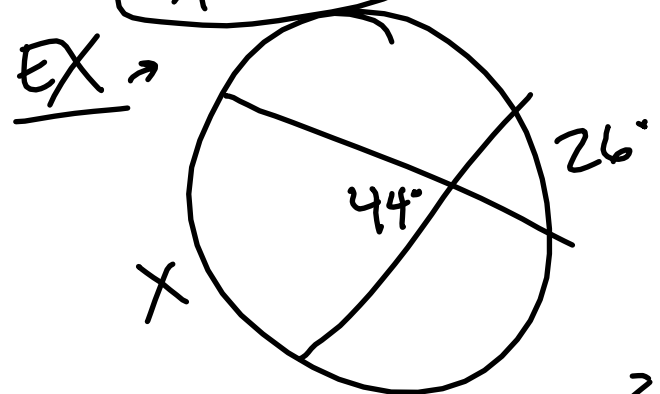
EX →



$$X = \frac{1}{2} (50 + 28) = \frac{1}{2} (78)$$

$$X = 39^\circ$$

EX →

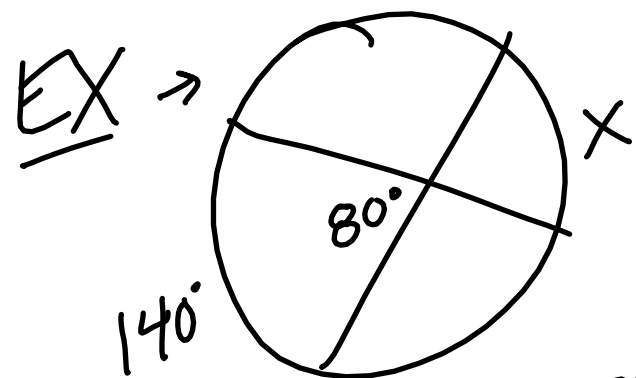


$$2 \cdot 44 = \frac{1}{2} (X + 26) \cdot 2$$

$$88 = X + 26$$

$$X = 62^\circ$$

EX →

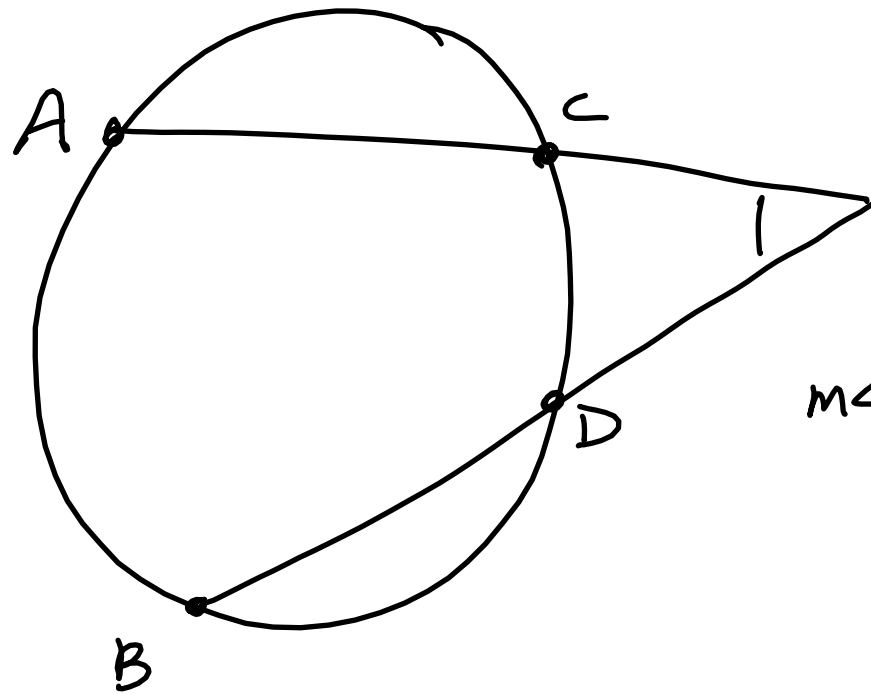


$$2 \cdot 80 = \frac{1}{2} (140 + X) \cdot 2$$

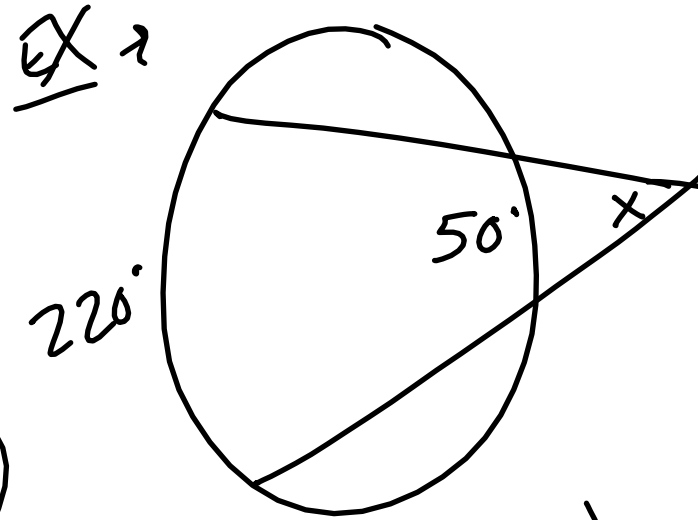
$$160 = 140 + X$$

$$X = 20^\circ$$

Outside Circle

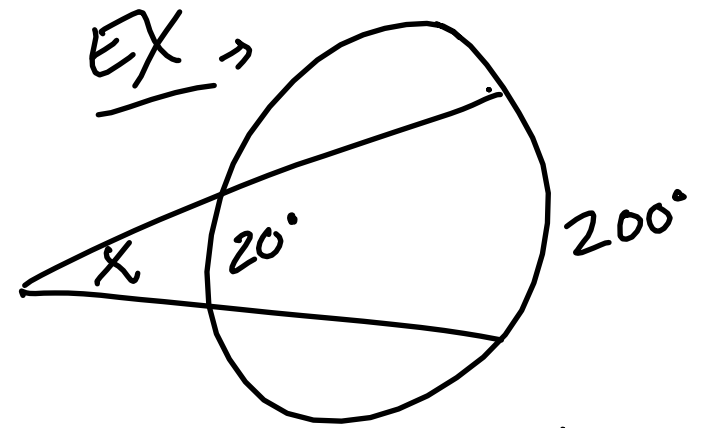


$$m\angle I = \frac{1}{2}(m\widehat{AB} - m\widehat{CD})$$



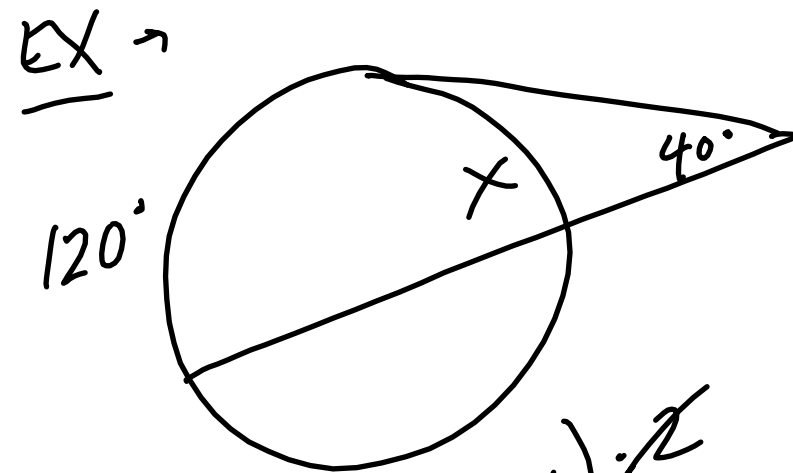
$$X = \frac{1}{2}(220 - 50)$$

$$X = \frac{1}{2}(170) = 85^\circ$$



$$X = \frac{1}{2}(200 - 20)$$

$$X = \frac{1}{2}(180) = 90^\circ$$

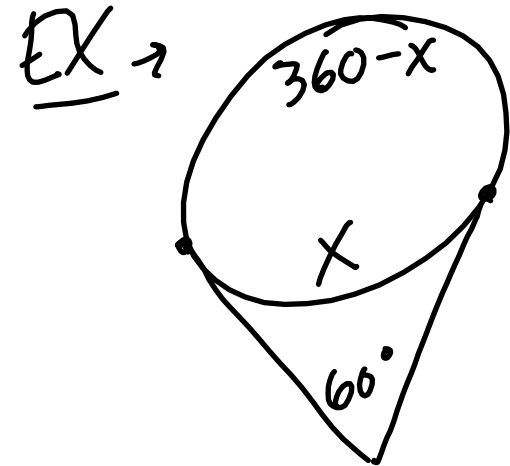


$$2 \cdot 40 = \frac{1}{2}(120 - X)$$

$$80 = 120 - X$$

$$-40 = -X$$

$$X = 40^\circ$$



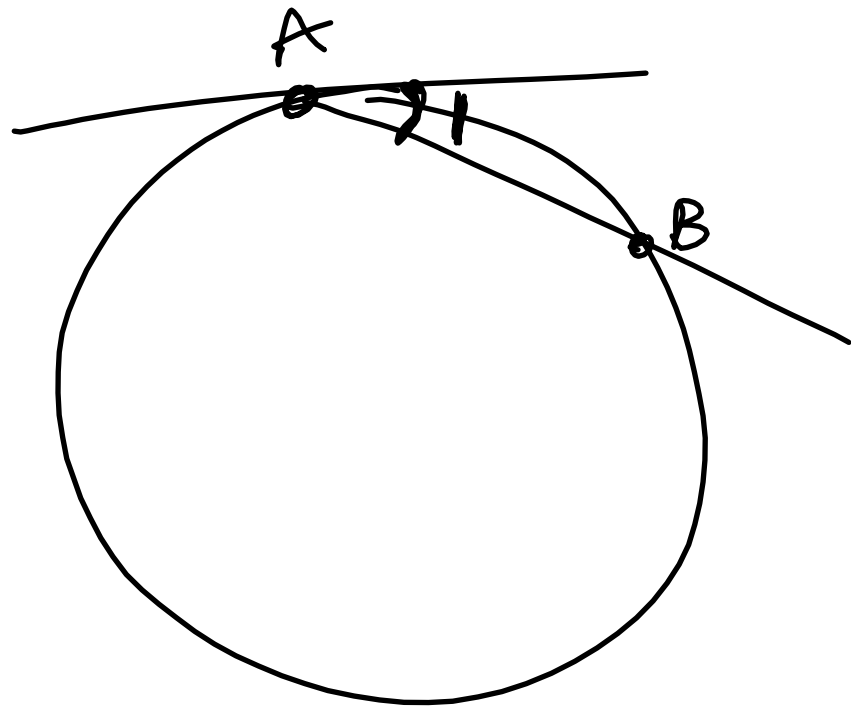
$$60 = \frac{1}{2}(360 - X - X)$$

$$2 \cdot 60 = \frac{1}{2}(360 - 2X)$$

$$120 = 360 - 2X$$

$$-2X = -240$$

$$X = 120^\circ$$



$$m\angle 1 = \frac{1}{2} m\widehat{AB}$$