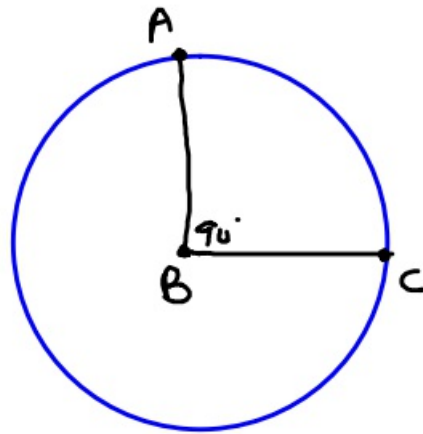
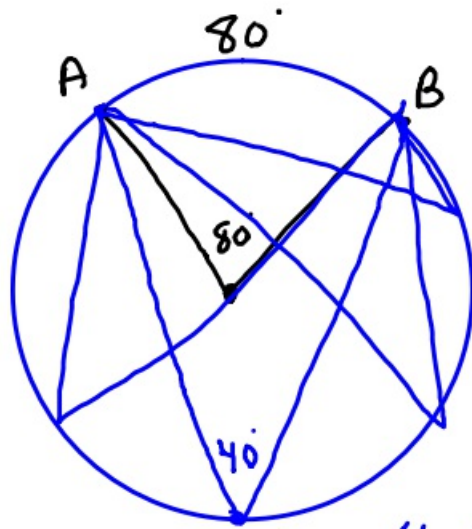


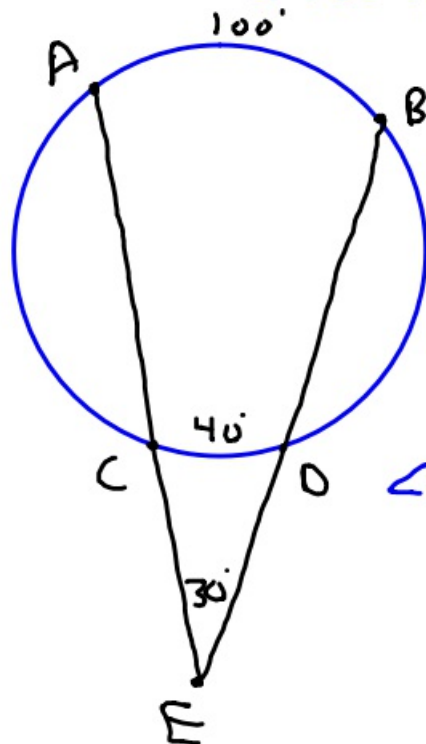
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$\angle ABC = 90^\circ$   
Central  $\angle = 90^\circ$   
 $\widehat{AC} = 90^\circ$

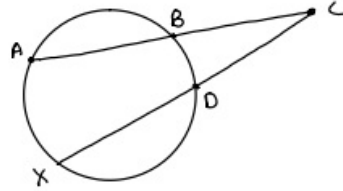


Inscribed angle



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

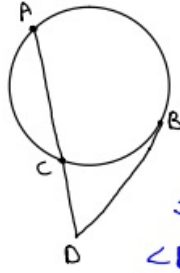
①



$\widehat{AB} = 110^\circ$   $\widehat{BD} = 50^\circ$   $\angle C = ?$

$\angle C = \frac{1}{2}(110 - 50)$   
 $\frac{1}{2}(60)$   
 $30^\circ$

②



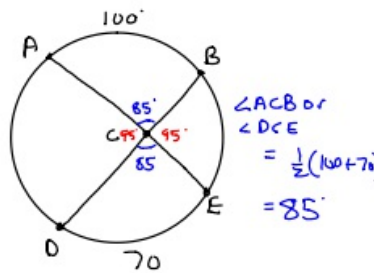
$\widehat{AB} = 170^\circ$

$\widehat{BC} = 50^\circ$

$\angle D = ?$

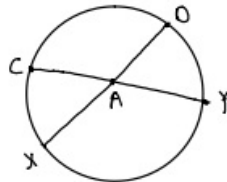
$\frac{1}{2}(170 - 50)$   
 $\angle D = 60^\circ$

③



$\angle ACB$  or  $\angle DCE$   
 $= \frac{1}{2}(100 + 70)$   
 $= 85^\circ$

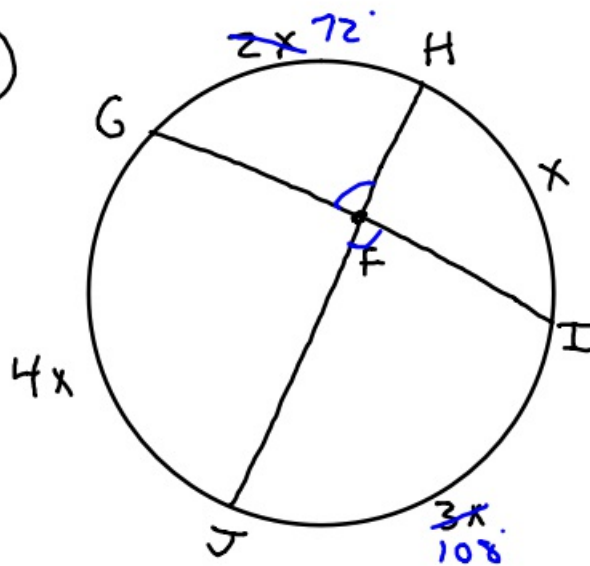
④



$\widehat{CX} = 50^\circ$   $\widehat{DY} = 60^\circ$   $\angle CA X = ?$

$\angle CA X = \frac{1}{2}(50 + 60)$   
 $= 55^\circ$

5



Find  $\angle JFI$

$$\widehat{GH} = 2x \quad \widehat{GJ} = 4x \quad \widehat{JI} = 3x \quad \widehat{HI} = x$$

$$2x + 4x + 3x + x = 360^\circ$$

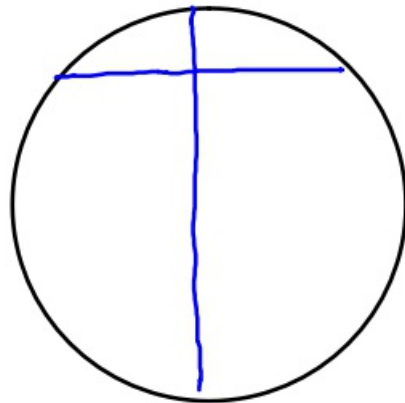
$$10x = 360$$

$$x = 36$$

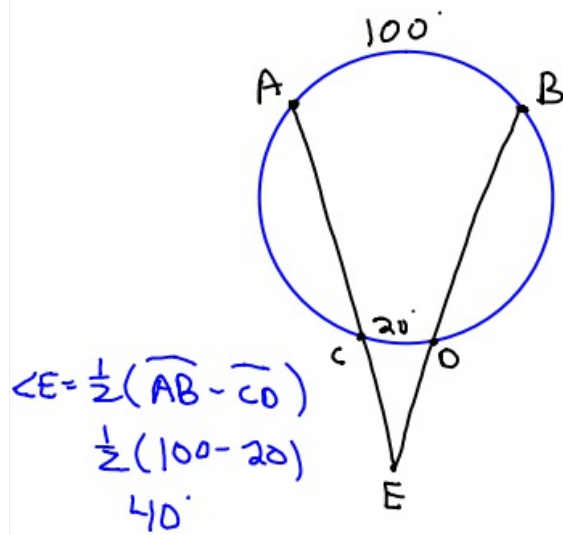
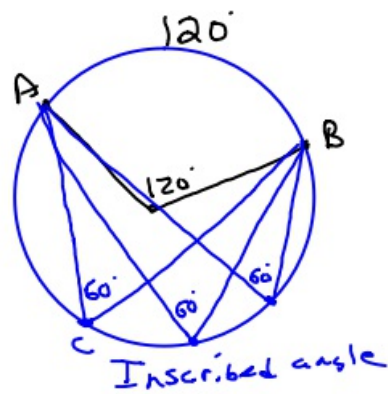
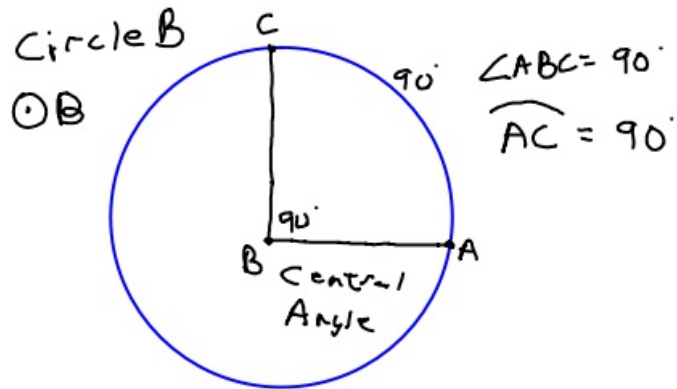
$$\angle JFI = \frac{1}{2} (108 + 72^\circ)$$

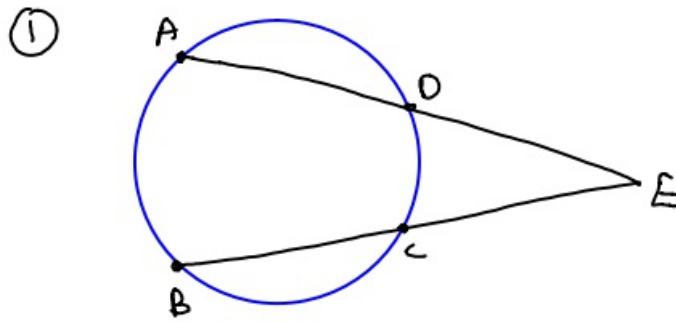
$$\frac{1}{2} (180^\circ)$$

$$90^\circ$$



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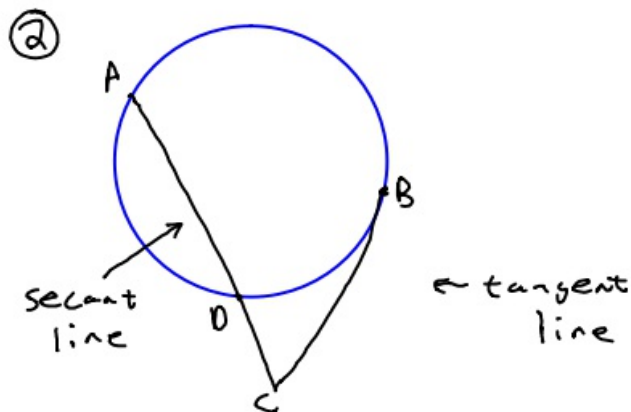




$$\widehat{AB} = 106^\circ \quad \widehat{DC} = 48^\circ \quad \angle E = ?$$

$$\angle E = \frac{1}{2}(106 - 48)$$

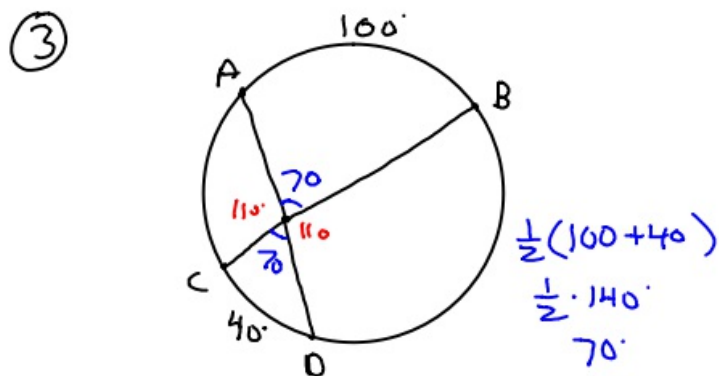
$$\begin{aligned} \angle E &= \frac{1}{2} \cdot 58 \\ &= 29^\circ \end{aligned}$$



$$\widehat{AB} = 140^\circ \quad \widehat{BD} = 60^\circ \quad \angle C = ?$$

$$\angle C = \frac{1}{2}(140 - 60)$$

$$= 40^\circ$$

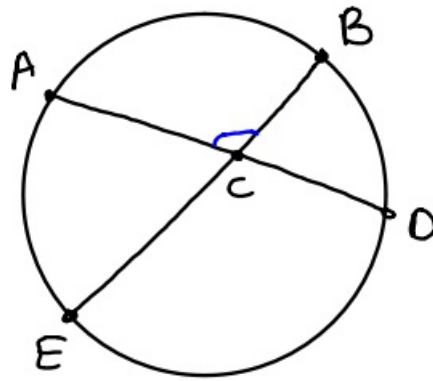


$$\frac{1}{2}(100 + 40)$$

$$\frac{1}{2} \cdot 140^\circ$$

$$70^\circ$$

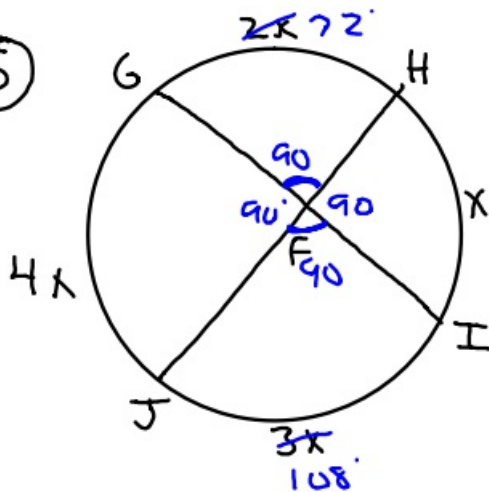
(4)



$$\widehat{AB} = 80^\circ \quad \widehat{ED} = 110^\circ \quad \angle ACB = ?$$

$$\begin{aligned} \angle ACB &= \frac{1}{2} (\widehat{AB} + \widehat{ED}) \\ &= 95^\circ \end{aligned}$$

(5)



$$\begin{aligned} \widehat{GH} &= 2x \\ \widehat{GJ} &= 4x \\ \widehat{JI} &= 3x \\ \widehat{HI} &= x \\ \angle JFI &= ? \end{aligned}$$

$$2x + 4x + 3x + x = 360^\circ$$

$$10x = 360$$

$$x = 36$$

$$\begin{aligned} \angle JFI &= \frac{1}{2} (72 + 108) \\ &= 90^\circ \end{aligned}$$