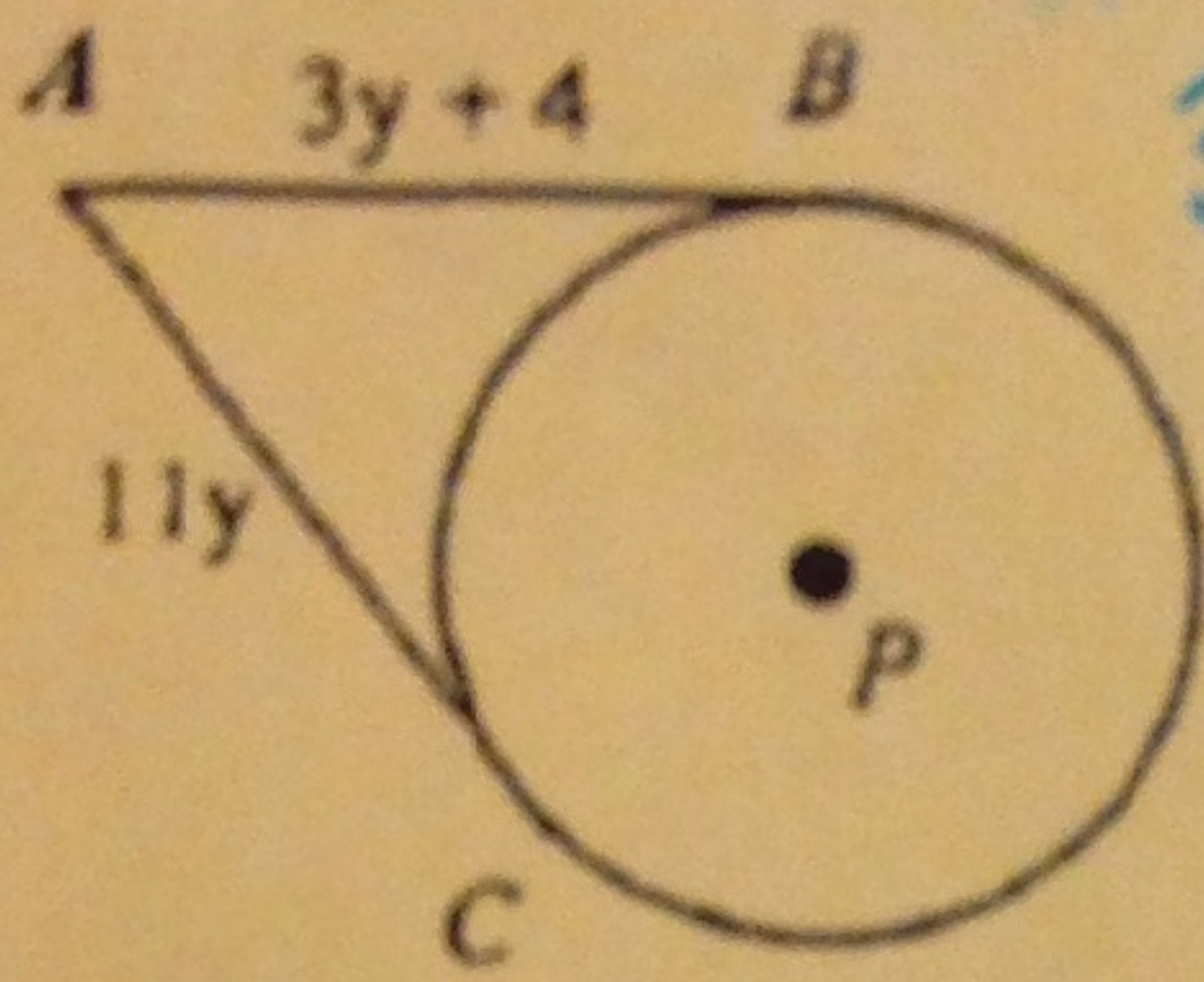


Show work. Give answers for #1-15 in simplest form (no decimals).

1. \overline{AB} and \overline{AC} are tangent to circle P . Find AB .

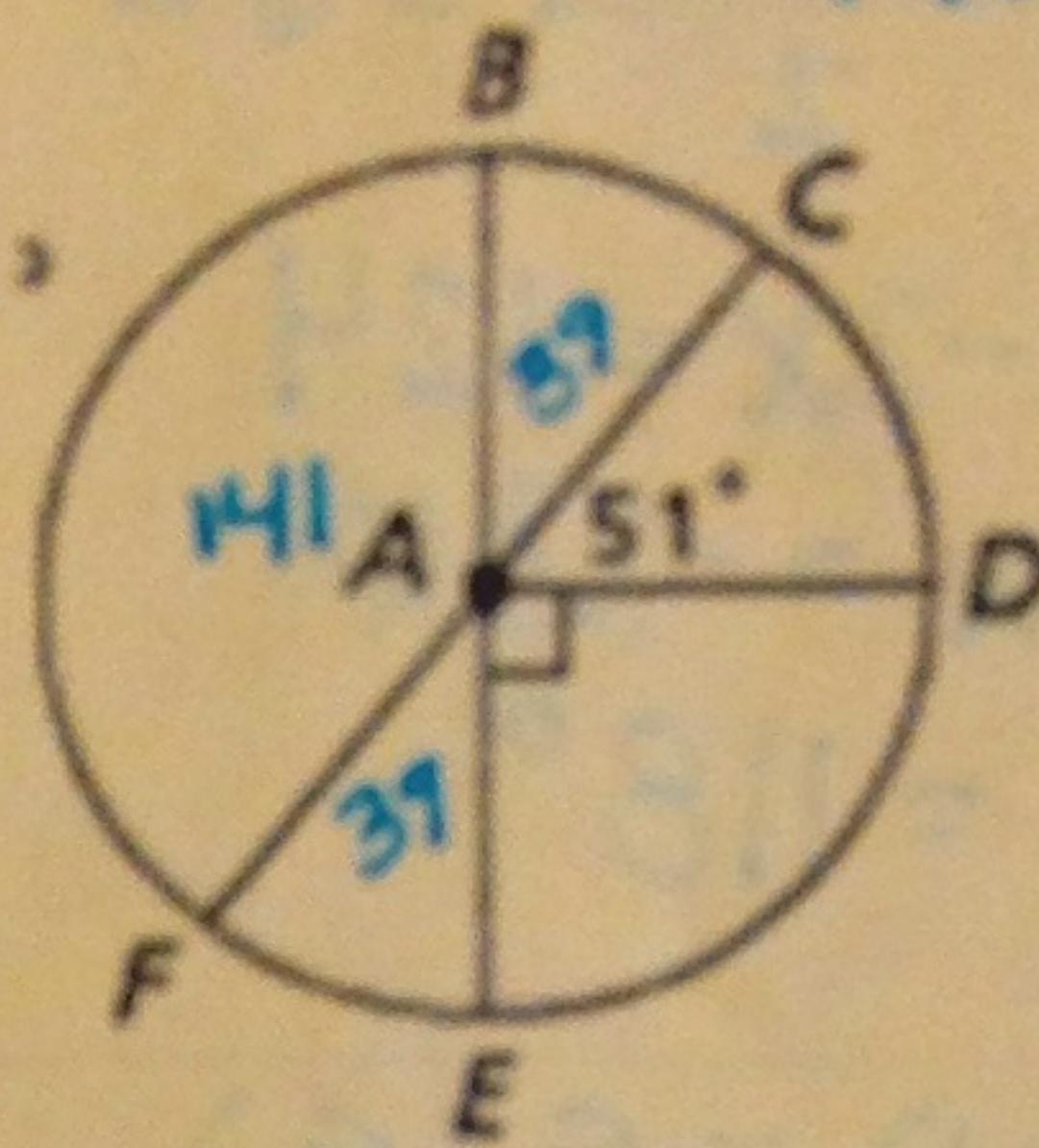


$$3y + 4 = 11y$$

$$4 = 8y$$

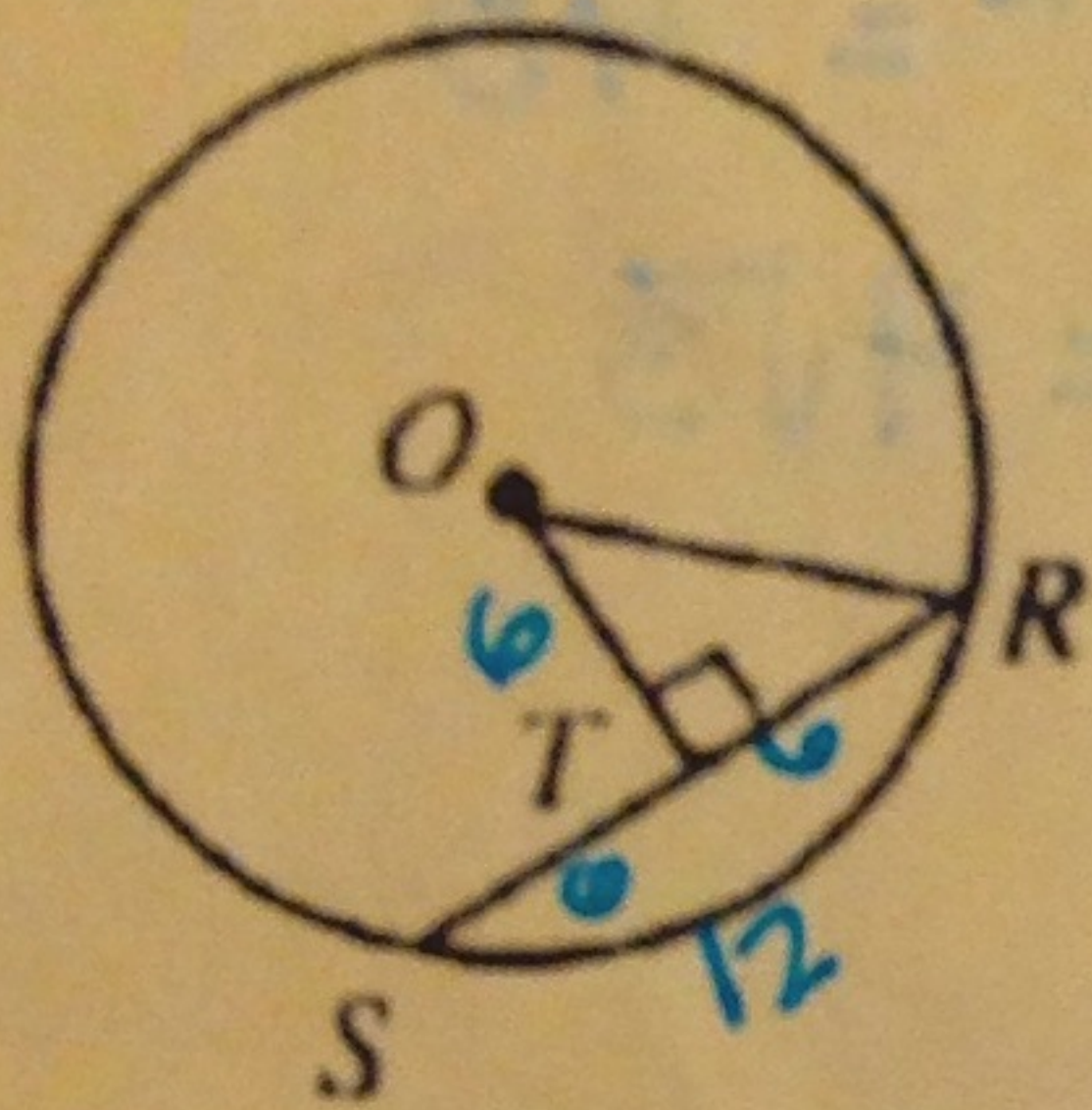
$$\frac{1}{2} = y$$

2. Find $m\widehat{CE}$ 141° and $m\widehat{DCF}$ 231° .



$$\widehat{CE} = 141^\circ$$

3. $OT = 6$ and $SR = 12$. Find the length of \overline{OR} .



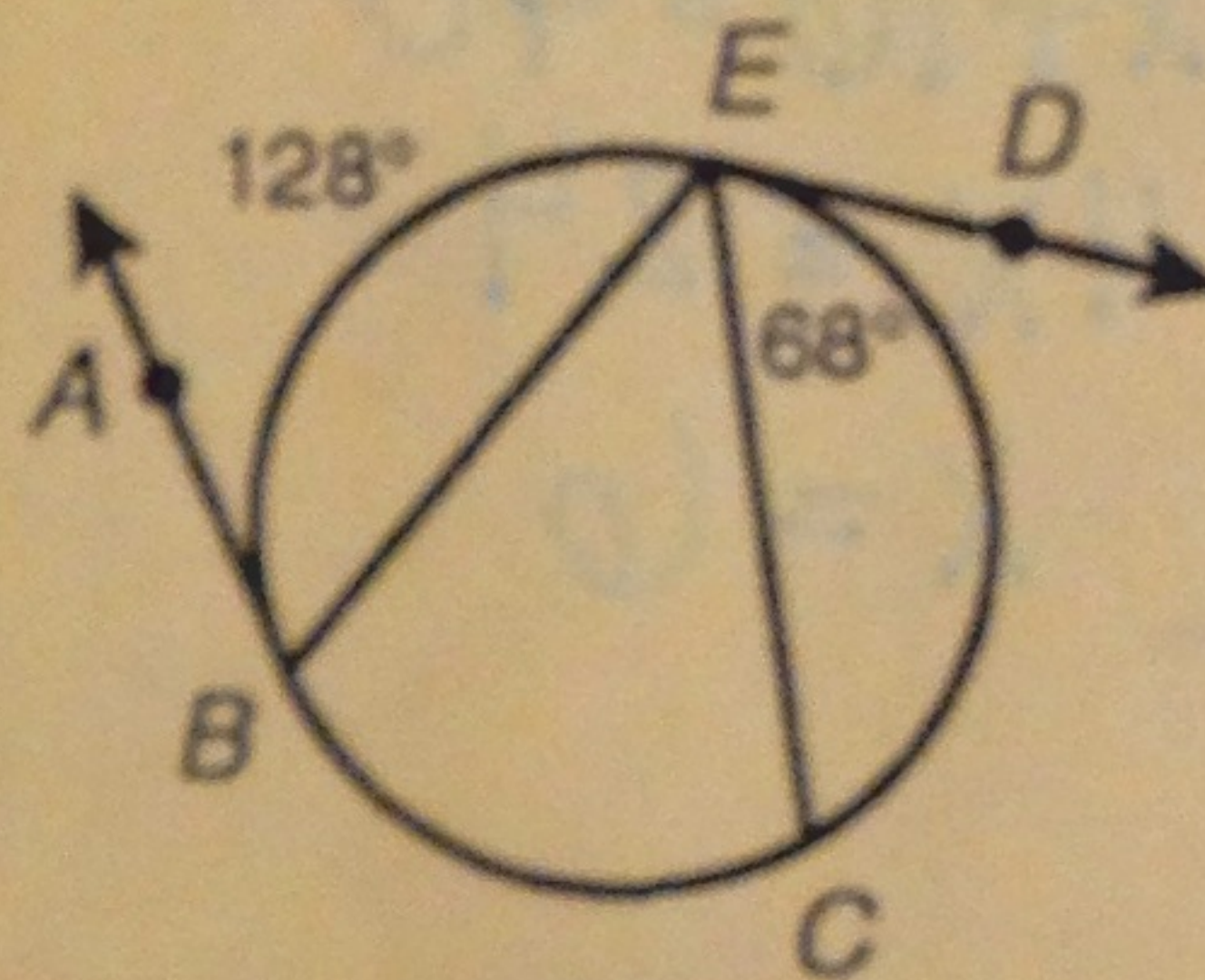
$$6^2 + 6^2 = OR^2$$

$$36 + 36 = OR^2$$

$$72 = OR^2$$

$$6\sqrt{2} = OR$$

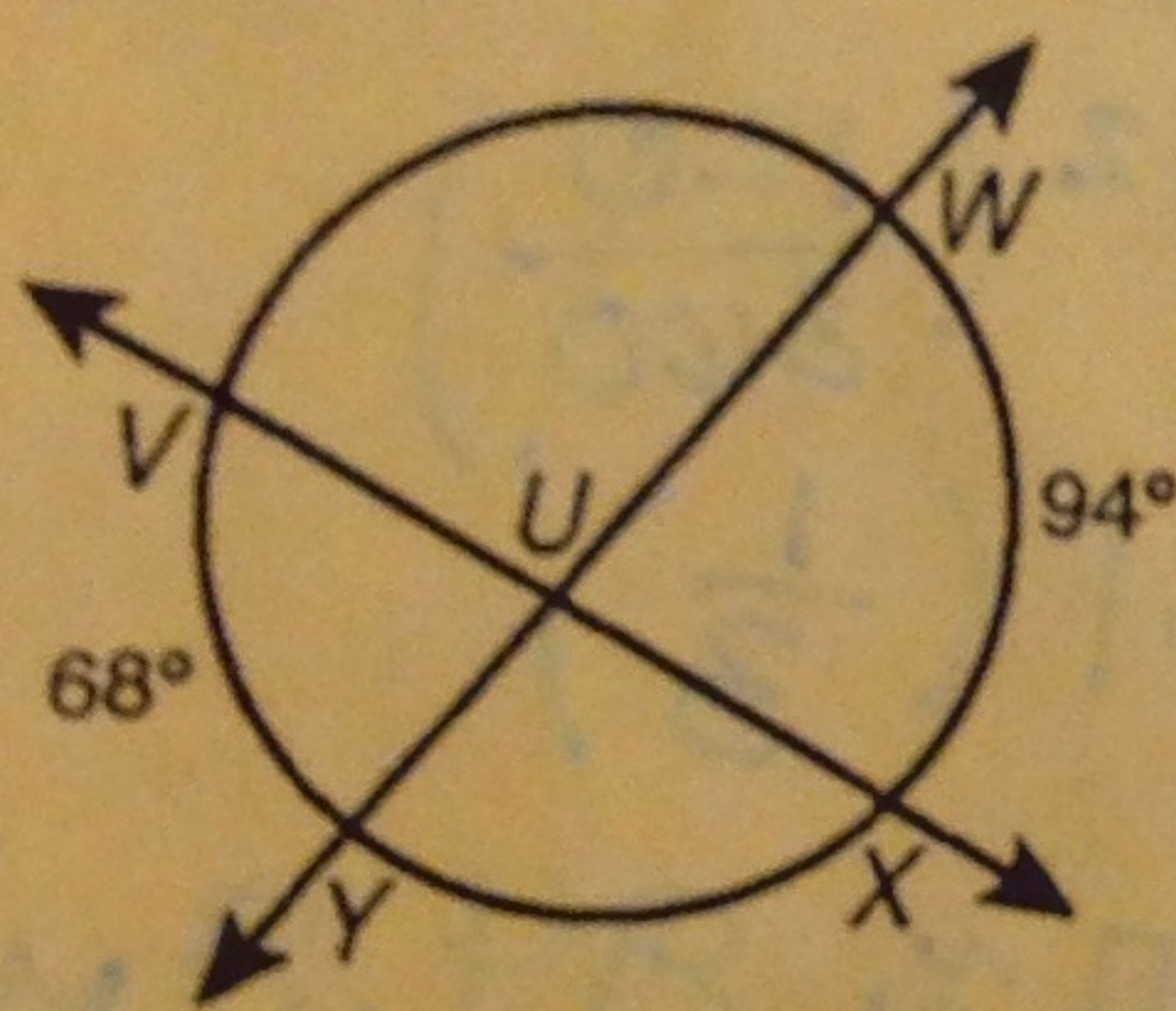
4.



$$m\angle ABE = \frac{128}{2} = 64^\circ$$

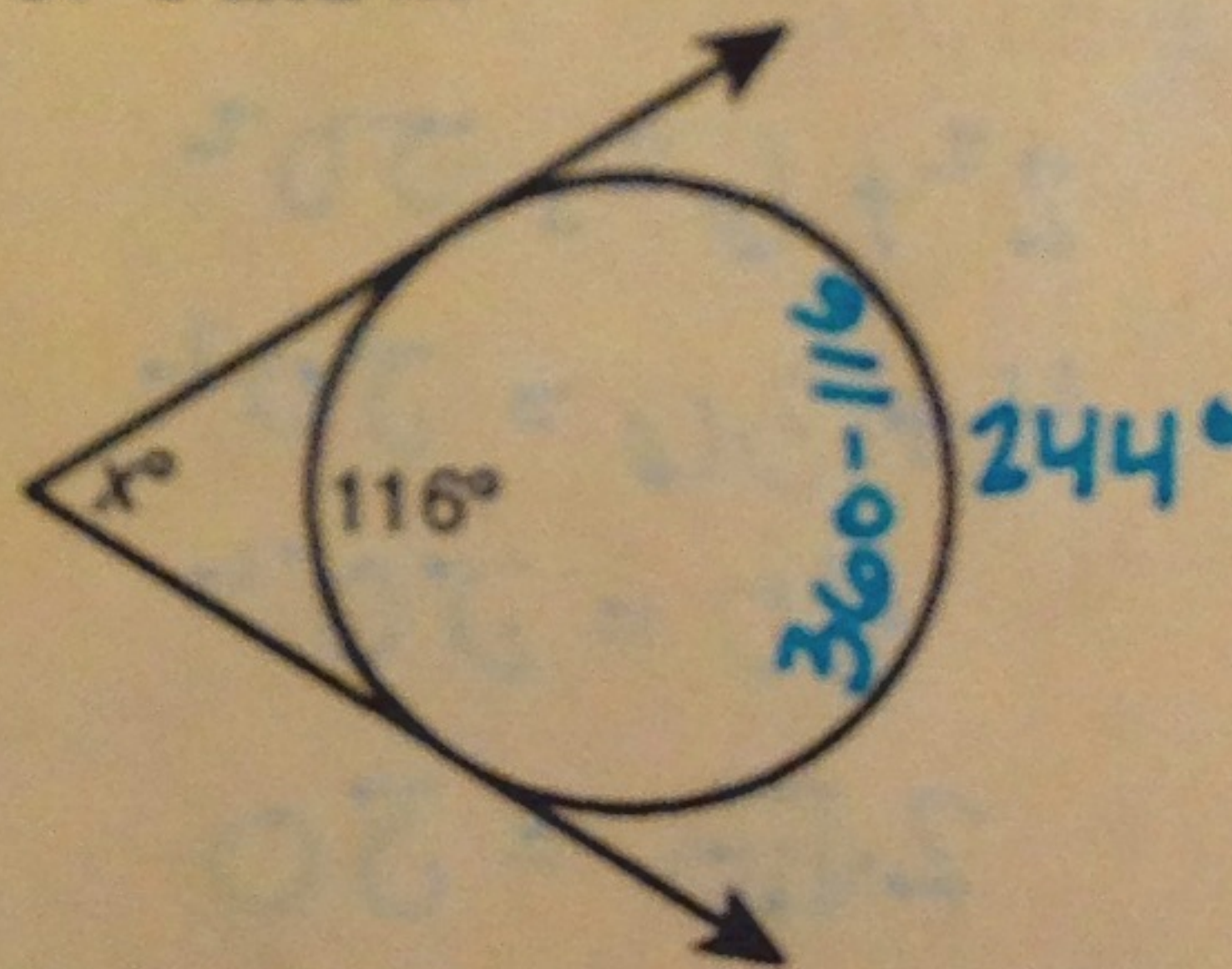
$$m\widehat{EC} = 68 \times 2 = 136$$

5. Find $m\angle WUX$.



$$\frac{68 + 94}{2} = \frac{162}{2} = 81^\circ$$

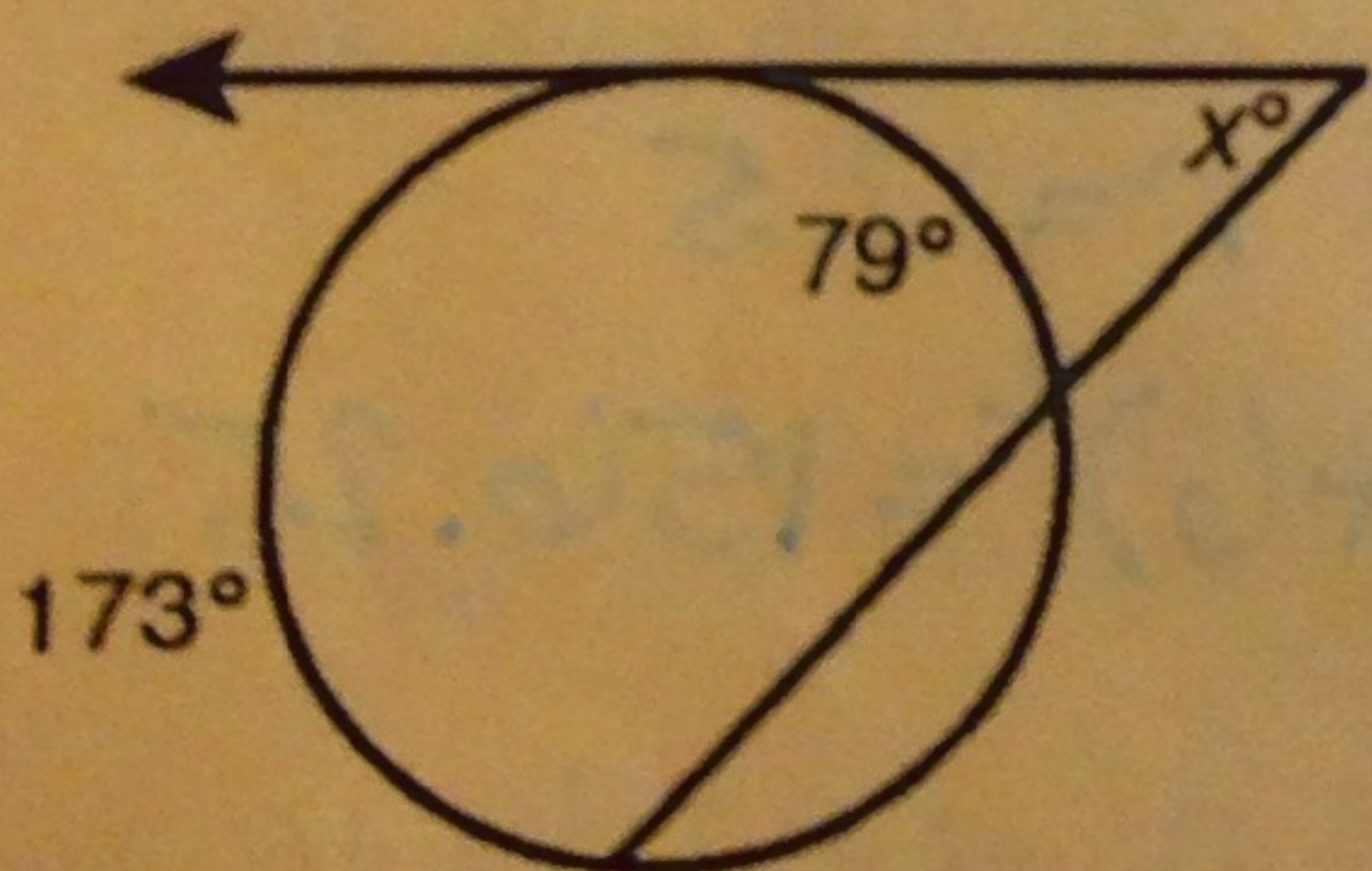
6. Find x .



$$\frac{244 - 116}{2} = \frac{128}{2}$$

$$= 64^\circ$$

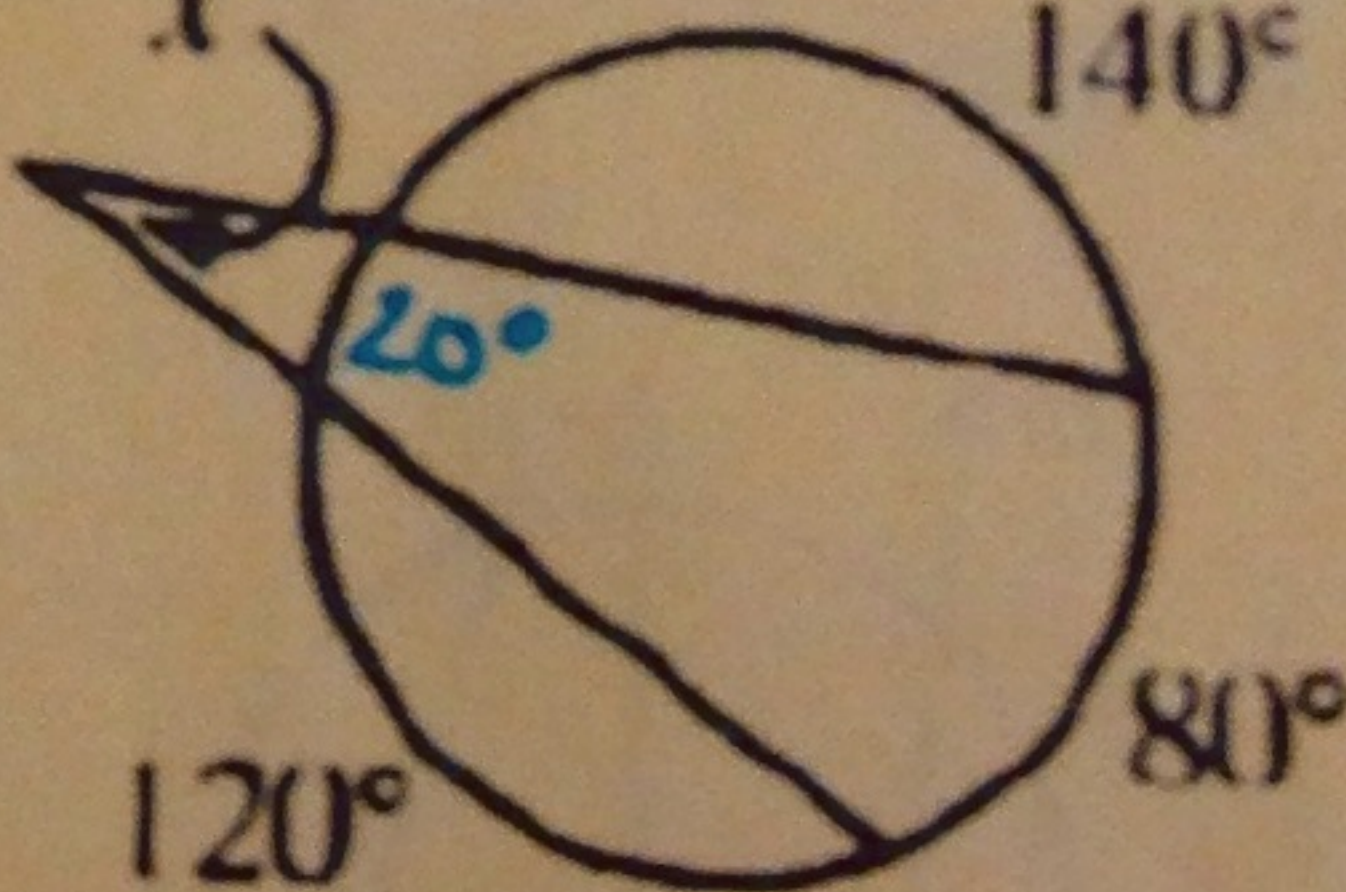
7. Find x .



$$\frac{173 - 79}{2} =$$

$$\frac{94}{2} = 47^\circ$$

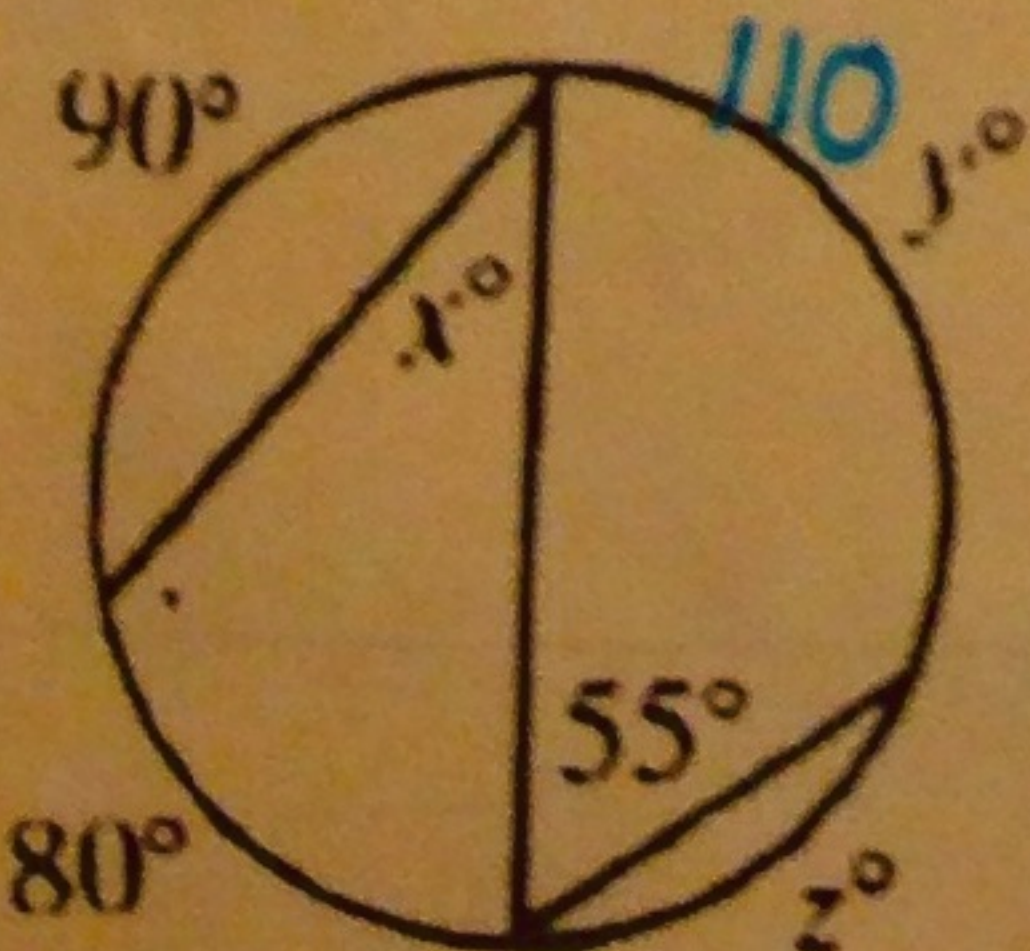
8. Find x .



$$360 - 340 = 20^\circ$$

$$\frac{80 - 20}{2} = \frac{60}{2} = 30^\circ$$

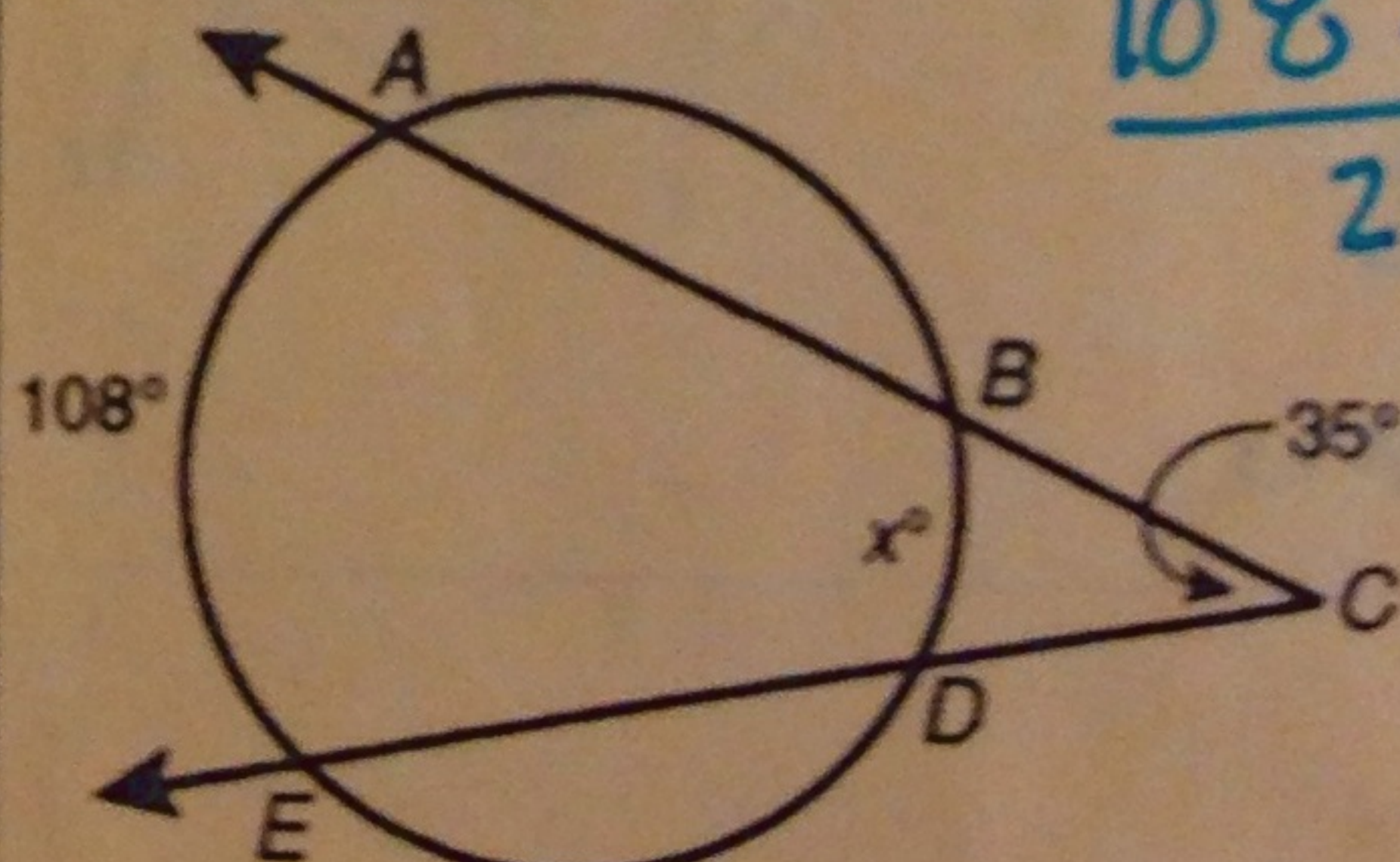
9. Find x and y .



$$x = \frac{80}{2} = 40^\circ$$

$$y = 110^\circ$$

10. Find x .



$$\frac{108 - x}{2} = 35$$

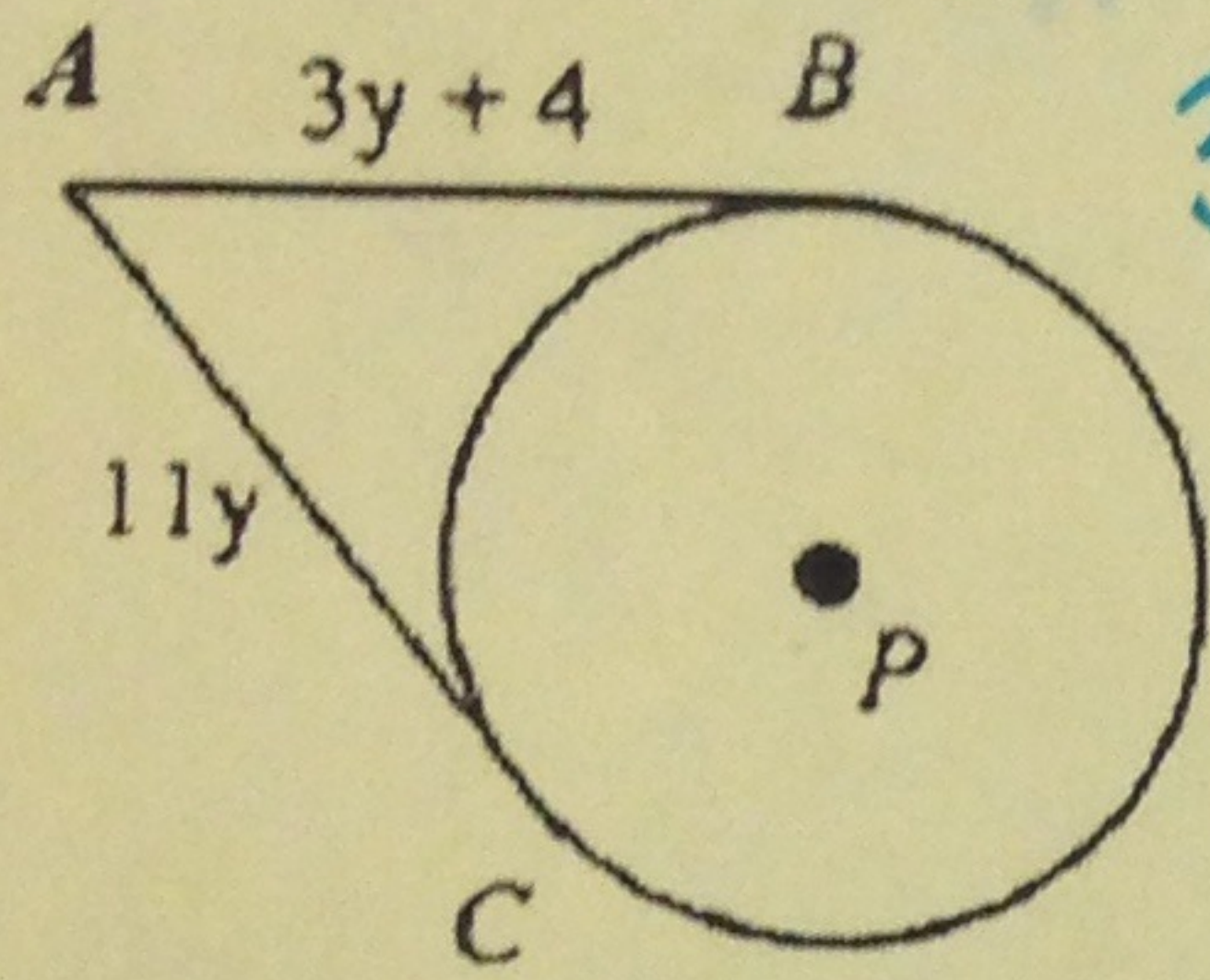
$$108 - x = 70$$

$$-x = -38$$

$$x = 38^\circ$$

Show work. Give answers for #1-15 in simplest form (no decimals).

1. \overline{AB} and \overline{AC} are tangent to circle P . Find AB .

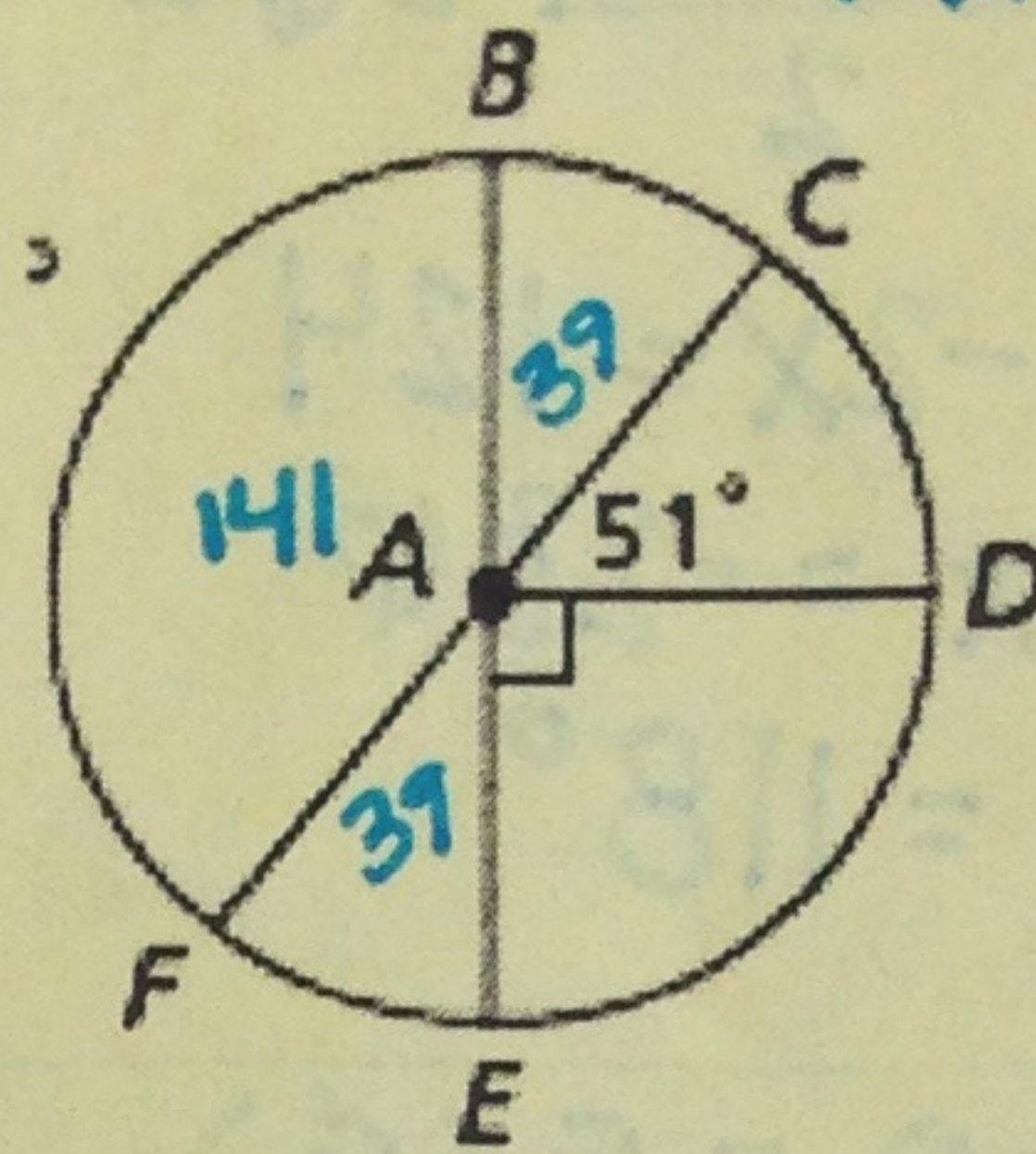


$$3y + 4 = 11y$$

$$4 = 8y$$

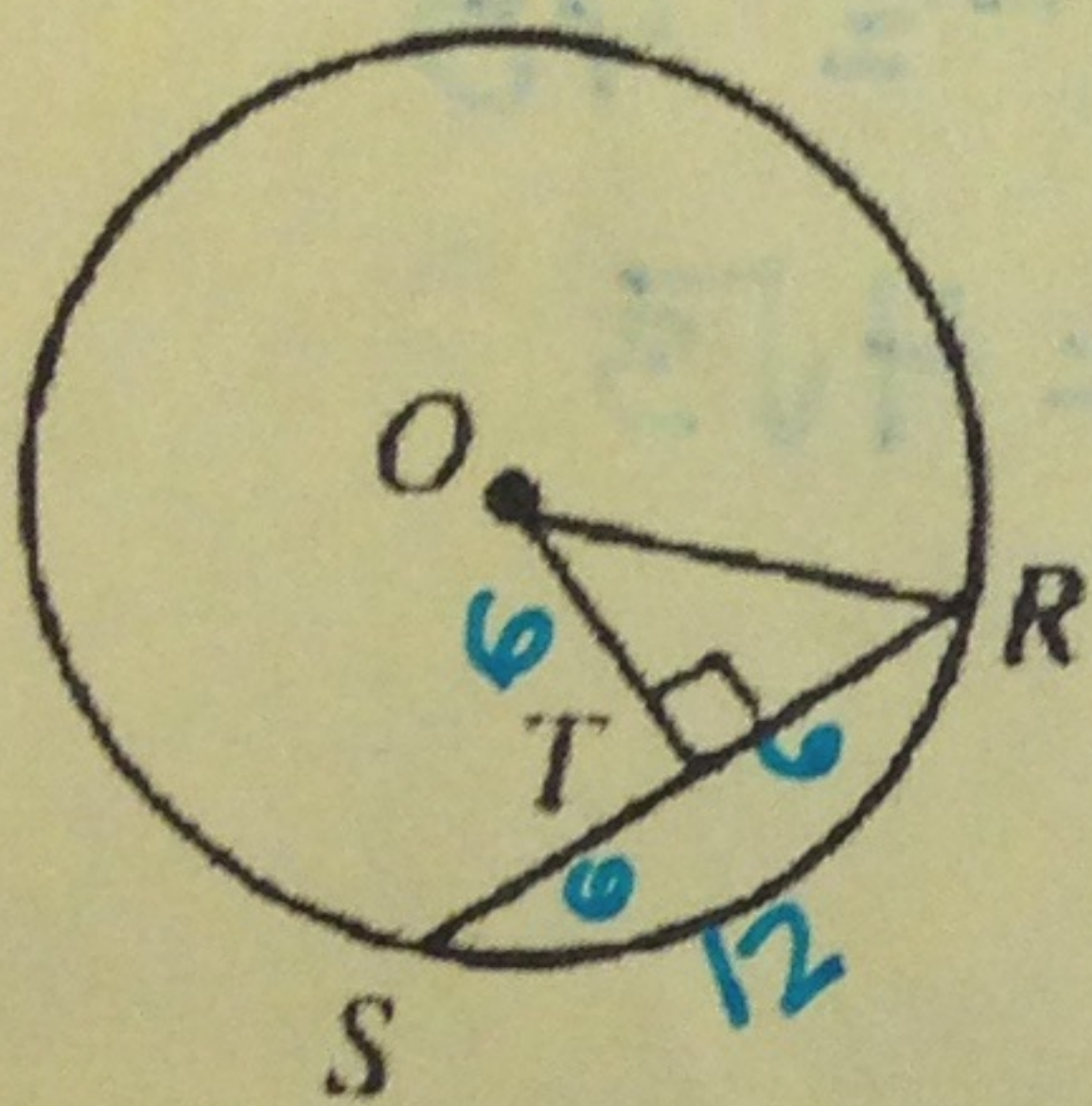
$$\frac{1}{2} = y$$

2. Find $m\widehat{CE}$ 141° and $m\widehat{DCF}$ 231° .



$$\widehat{CE} = 141^\circ$$

3. $OT = 6$ and $SR = 12$. Find the length of \overline{OR} .



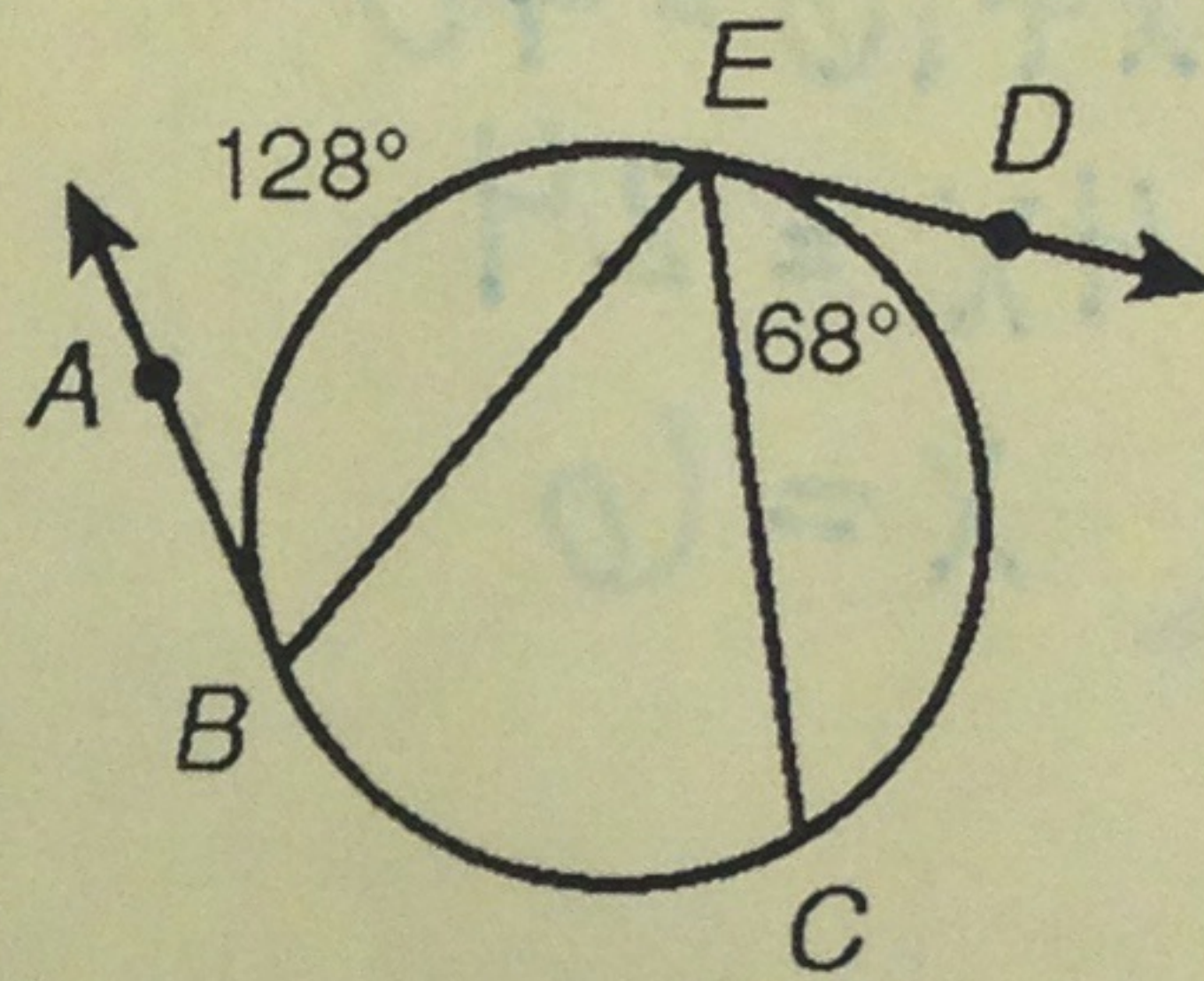
$$6^2 + 6^2 = OR^2$$

$$36 + 36 = OR^2$$

$$72 = OR^2$$

$$6\sqrt{2} = OR$$

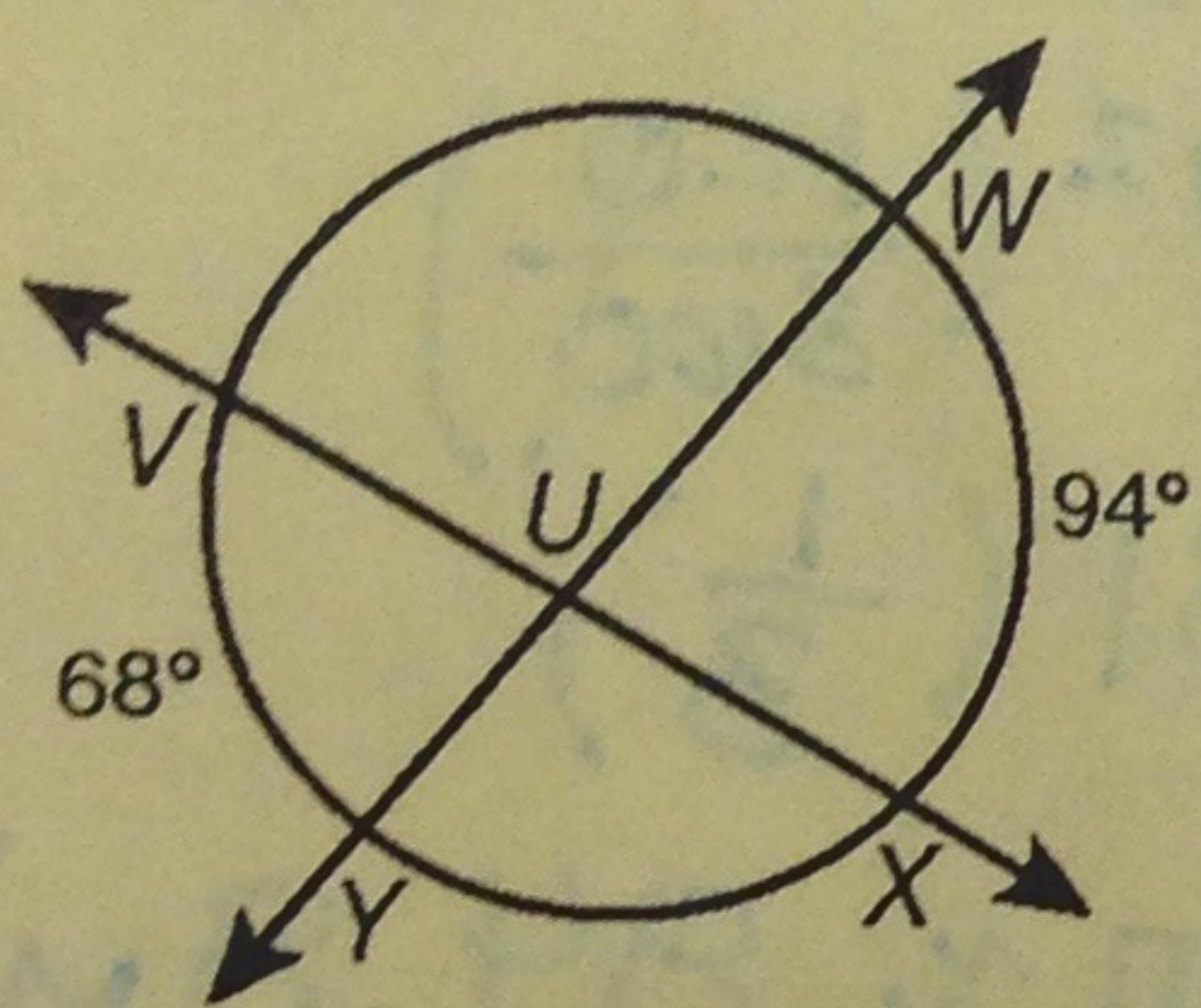
4.



$$m\angle ABE = \frac{128}{2} = 64^\circ$$

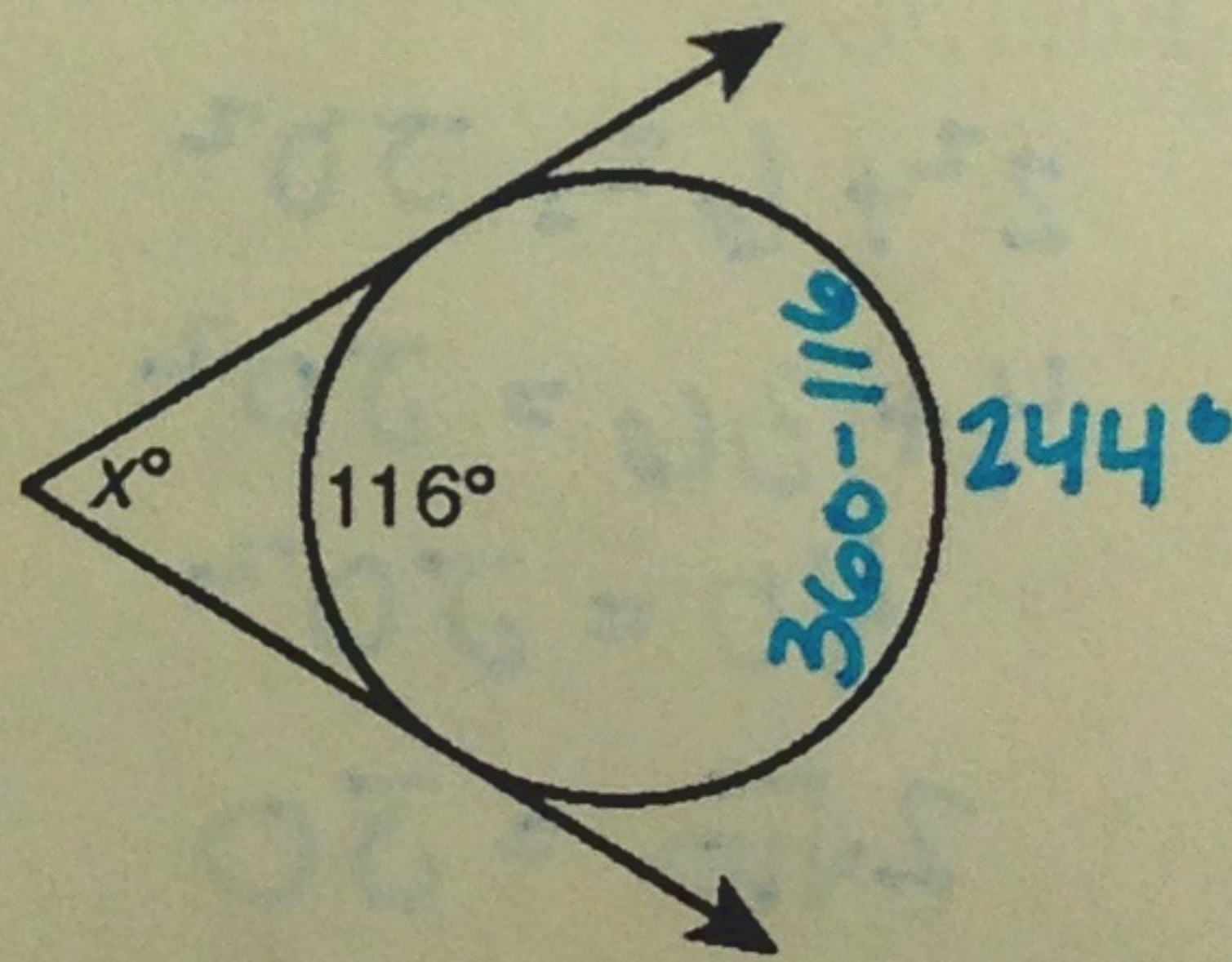
$$m\widehat{EC} = 68 \times 2 = 136$$

5. Find $m\angle WUX$.



$$\frac{68 + 94}{2} = \frac{162}{2} = 81^\circ$$

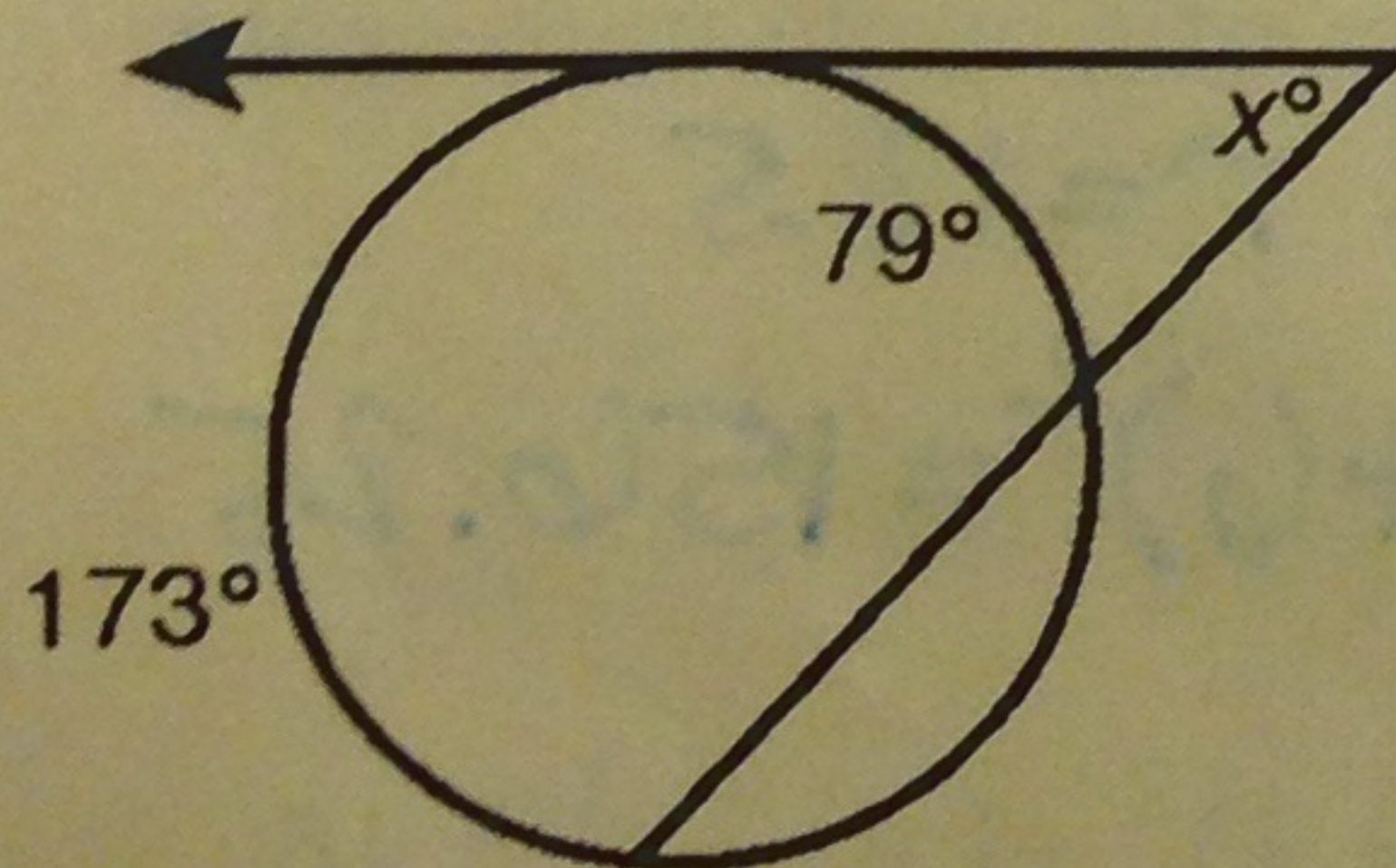
6. Find x .



$$\frac{244 - 116}{2} = \frac{128}{2}$$

$$= 64^\circ$$

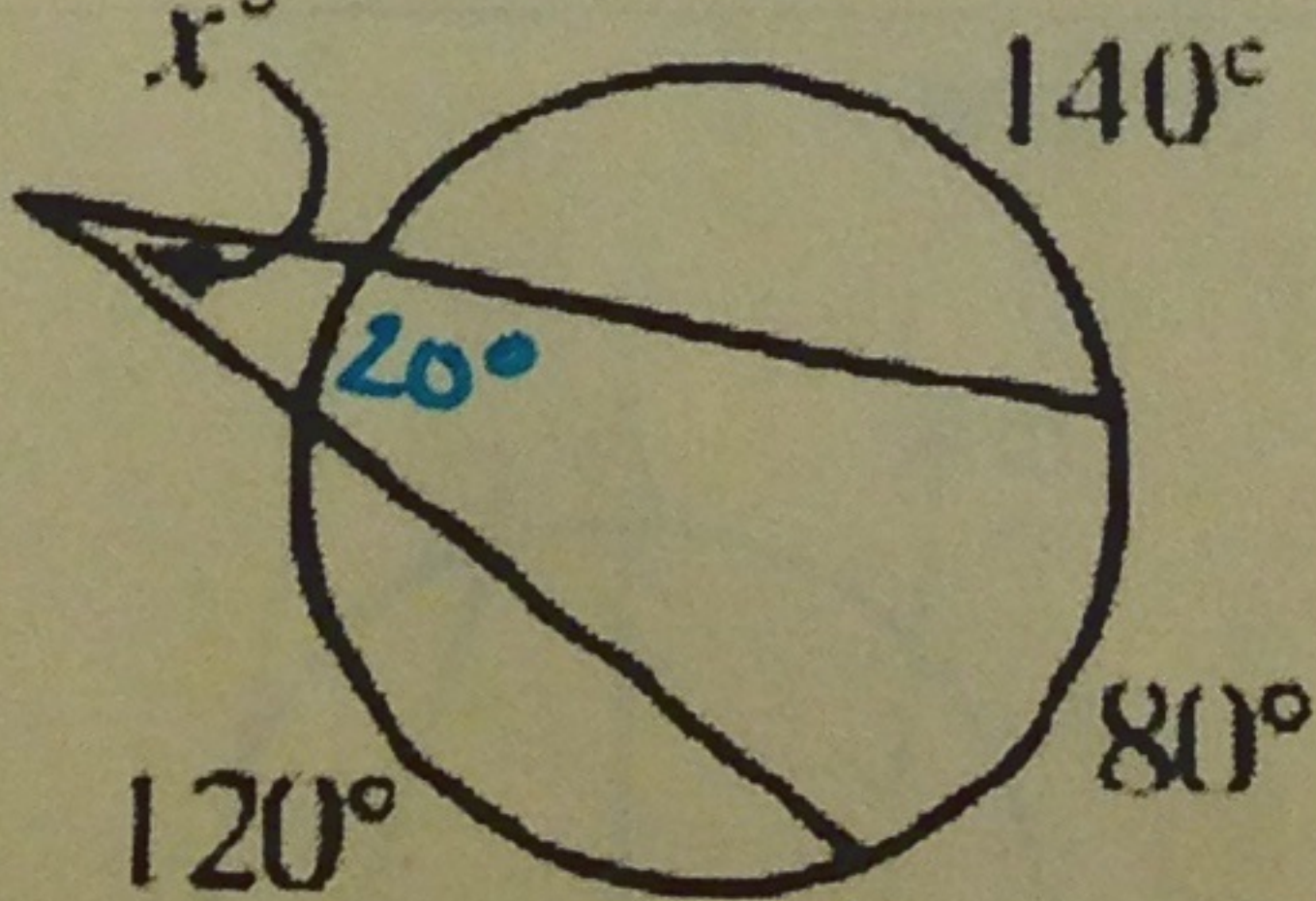
7. Find x .



$$\frac{173 - 79}{2} =$$

$$\frac{94}{2} = 47^\circ$$

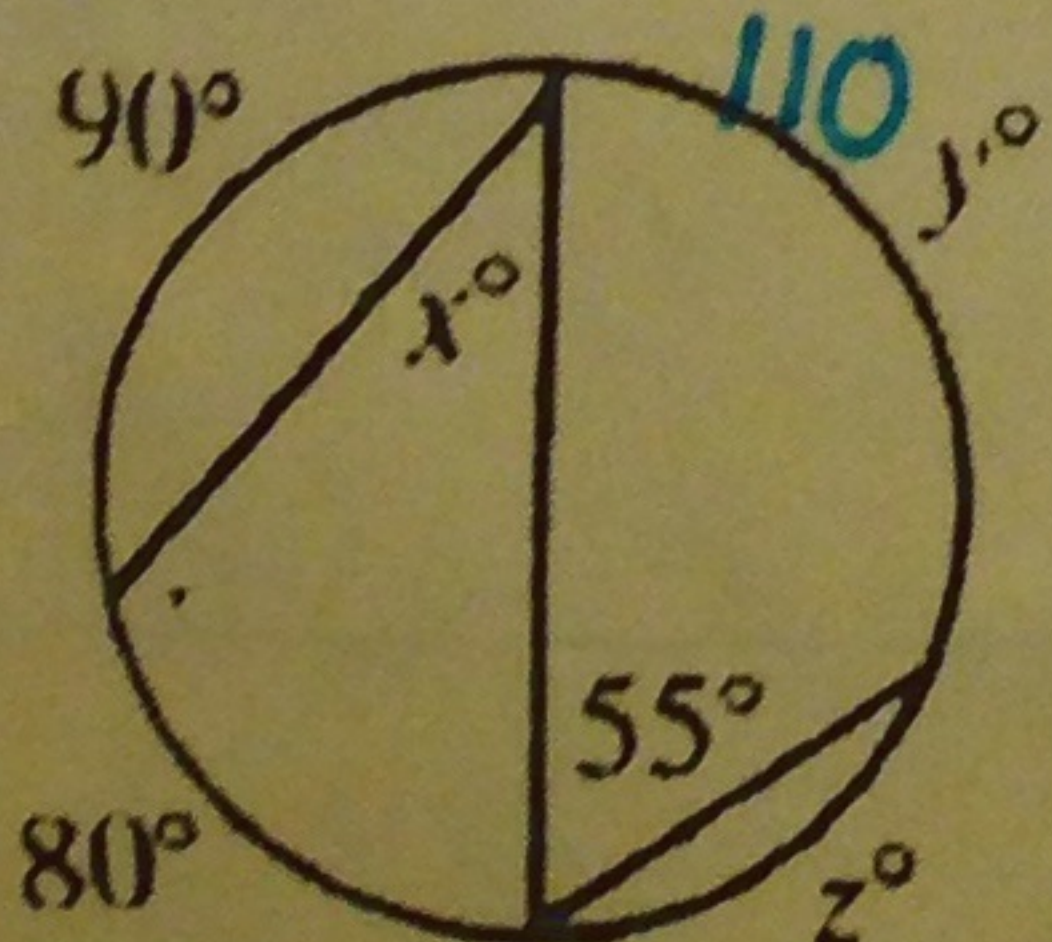
8. Find x .



$$360 - 340 = 20^\circ$$

$$\frac{80 - 20}{2} = \frac{60}{2} = 30^\circ$$

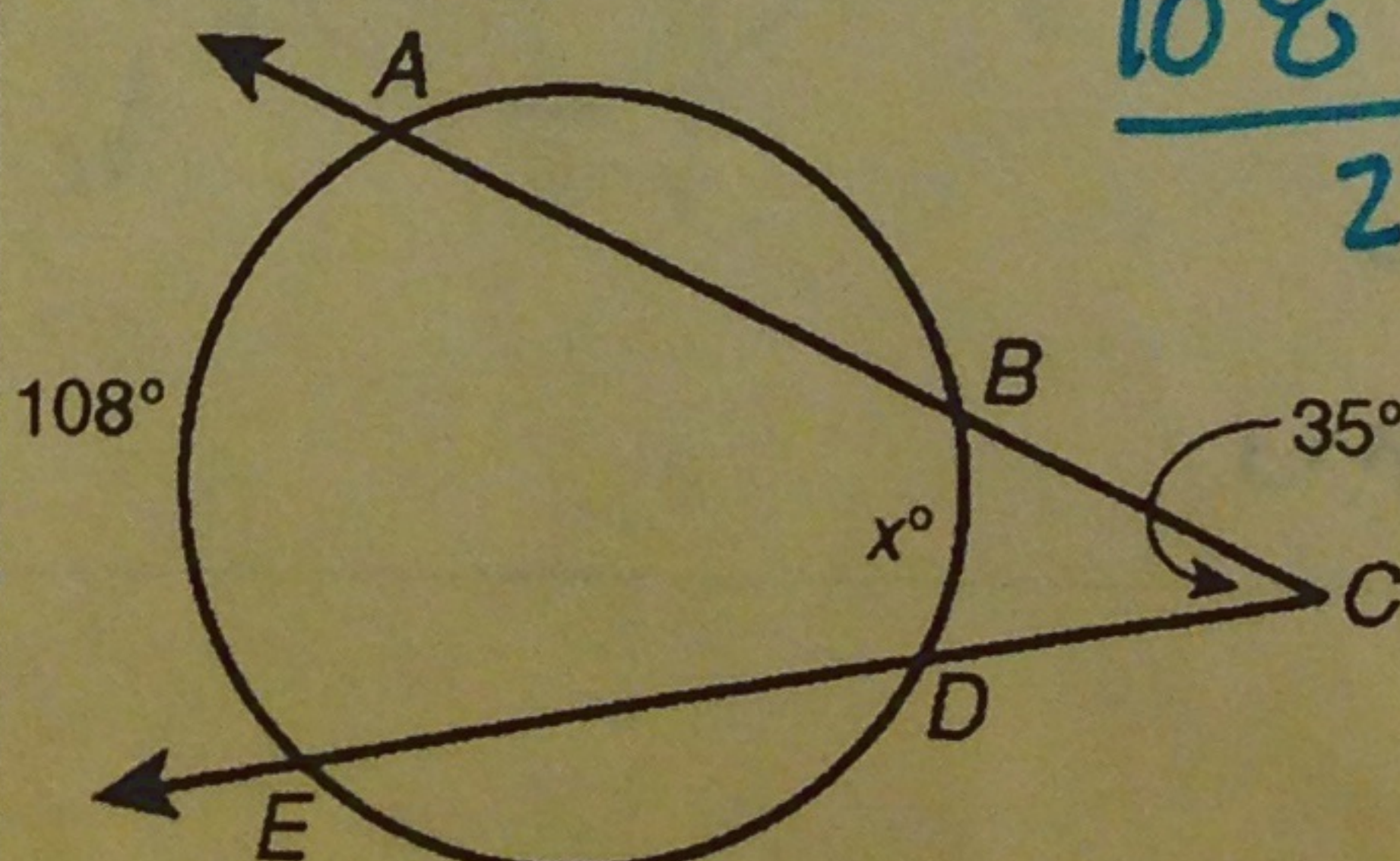
9. Find x and y .



$$x = \frac{80}{2} = 40^\circ$$

$$y = 110^\circ$$

10. Find x .



$$\frac{108 - x}{2} = 35$$

$$108 - x = 70$$

$$-x = -38$$

$$x = 38^\circ$$