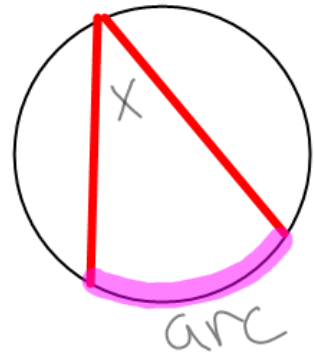
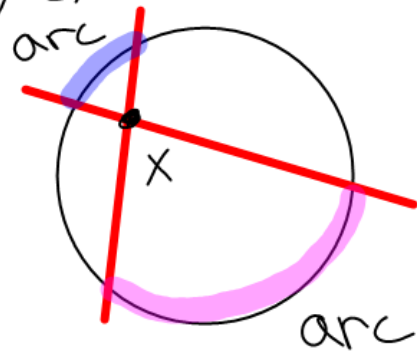


1.) On Circle



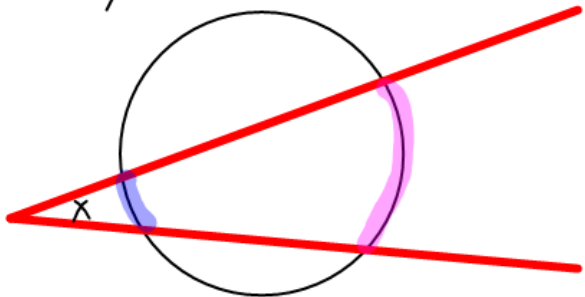
$$x = \frac{\text{arc}}{2}$$

2.) Inside Circle



$$x = \frac{\text{arc} + \text{arc}}{2}$$

3.) Outside Circle



$$x = \frac{\text{arc} - \text{arc}}{2}$$

1.)



$$2 \cdot \frac{a}{2} = 70 \cdot 2$$

$$a = 140$$

2.)



$$b = \frac{180}{2}$$

$$b = 90^\circ$$

3.)



$$x = \frac{180}{2}$$

$$x = 90^\circ$$

$$c = 180 - 90 - 67$$

$$c = 23^\circ$$

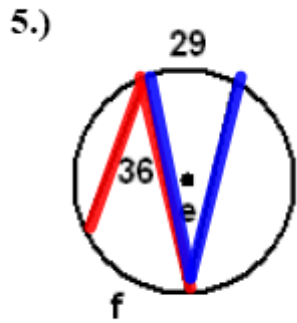
4.)



$$86 \cdot 2 = 172$$

$$d = 72 = 172$$

$$d = 100$$

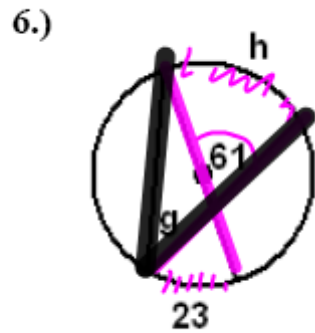


$$f = 36 \cdot 2$$

$$f = 72^\circ$$

$$e = \frac{29}{2}$$

$$e = 14.5$$



$$2 \cdot 61 = \frac{23 + h}{2} \cdot 2$$

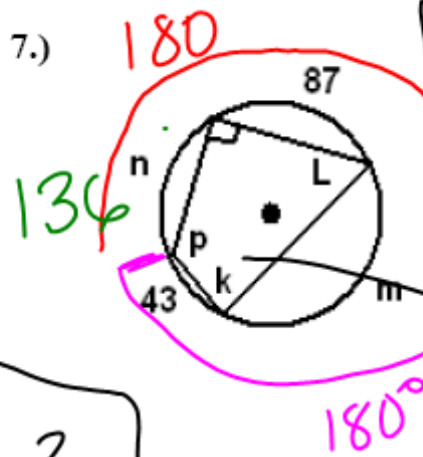
$$122 = 23 + h$$

$$-23 \quad -23$$

$$h = 99^\circ$$

$$g = \frac{99}{2}$$

$$g = 49.5^\circ$$



$$m = 180 - 43$$

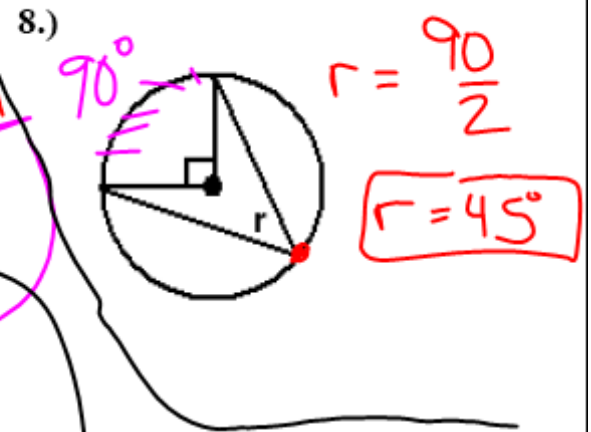
$$m = 137^\circ$$

$$n = 180 - 87$$

$$n = 93$$

$$L = \frac{136}{2} = 68^\circ$$

$$k = \frac{180}{2} = 90^\circ$$

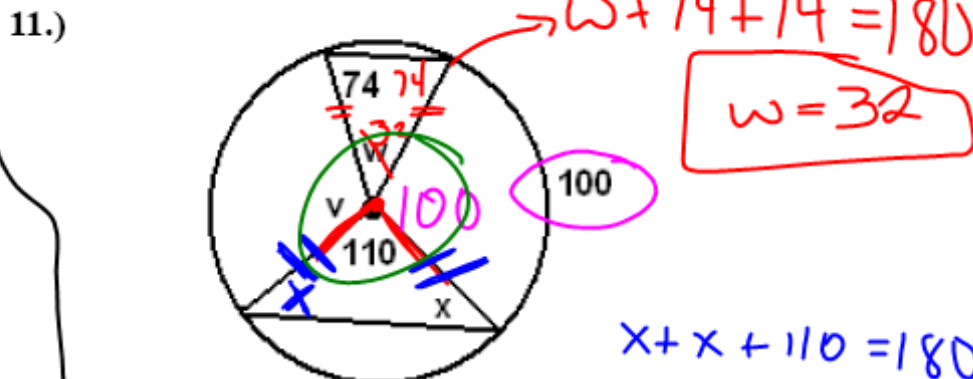
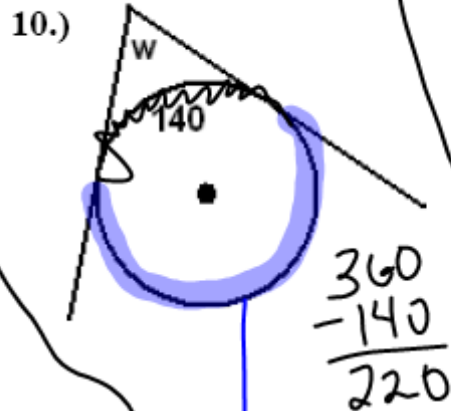
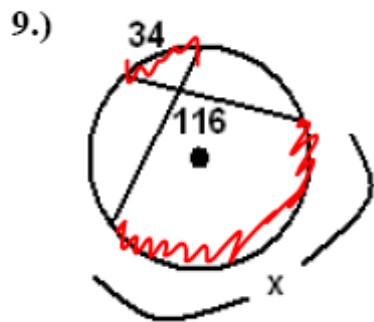


$$r = \frac{90}{2}$$

$$r = 45^\circ$$

$$360 - 90 - 68 - 90$$

$$p = 112^\circ$$



$$2 \cdot 116 = \frac{x + 34}{2} \cdot 2$$

$$232 = x + 34$$

$$198^\circ = x$$

$$\begin{array}{r} 360 \\ - 140 \\ \hline 220 \end{array}$$

$$w = \frac{220 - 140}{2}$$

$$w = 40^\circ$$

$$z = 110$$

$$v = 360 - 110 - 100 - 32$$

$$v = 118^\circ$$

$$w + 74 + 74 = 180$$

$$w = 32$$

$$x + x + 110 = 180$$

$$2x = 70$$

$$x = 35$$