

**OBJECTIVE 1: Exterior Angles of Circles**

Hopefully you watched the videos posted to Google Classroom before now, otherwise take the four minutes and watch them, and then come back to the board to finish the tasks.

**TASK 1:**

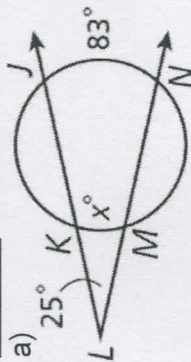
Draw a circle with an exterior angle, and write the formula to find the angle measure. Label all points on the circle (should be 5 capital letters.)



$$m\angle C = \frac{BD + AE}{2}$$

**OBJECTIVE 2: Exterior Angles of a Circle**

**TASK 2:** Use the formula from TASK 1 to find the value for x.

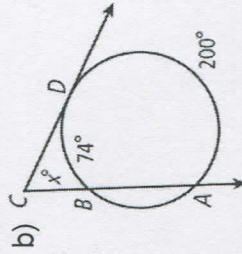


$$m\angle L = \frac{JK + MN}{2}$$

$$25 = \frac{83 - x}{2}$$

$$50 = 83 - x$$

$$x = 33$$



$$m\angle C = \frac{DA - BD}{2}$$

$$x = \frac{200 - 74}{2} = \frac{126}{2}$$

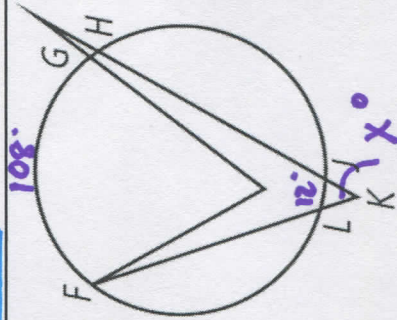
$$x = 63$$

**TASK 3: Real World Application**

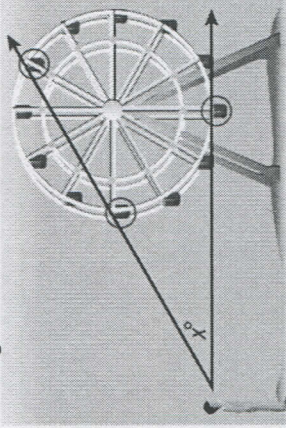
a) In the company logo shown,  $m\widehat{FH} = 108^\circ$ , and  $m\angle J = 12^\circ$ .

What is the  $m\angle FKH$ ?

$$x = \frac{108 - 12}{2} = \frac{96}{2} = 48^\circ$$



b) An observer watches people riding a Ferris wheel that has 12 equally spaced cars. Find x.



$$\frac{360}{12} = 30^\circ$$

$$x = \frac{150 - 90}{2} = \frac{60}{2}$$

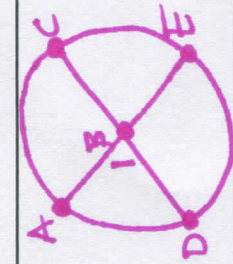
$$x = 30^\circ$$



**OBJECTIVE 3: Interior Angles of a Circle**

**TASK 4:**

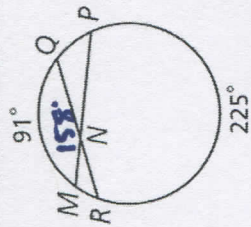
Draw a circle with an interior angle (not central or inscribed), and write the formula to find the angle measure. Label all points on the circle (should be 5 capital letters.)



$$m\angle I = \frac{AD + CE}{2}$$

**TASK 5: Interior Angles of a Circle**

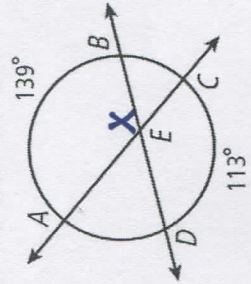
a) Find the  $m\angle MNR$



$$m\angle Q = \frac{225 + 91}{2} = 158^\circ$$

$$180 - 158 = 22^\circ$$

b) Find the  $m\angle AEB$



$$x = \frac{113 + 139}{2} = \frac{252}{2} = 126^\circ$$

**TASK 6:** If  $m\widehat{BC} = 90^\circ$ , find  $y$  and  $m\widehat{CD}$ .

$$\frac{60 + 180}{2} = 50$$

$$60 + 80 = 140$$

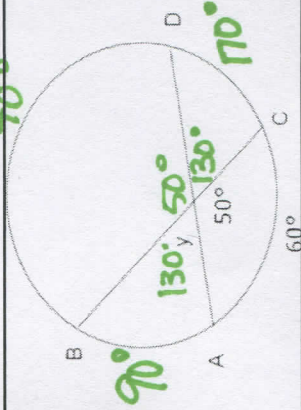
$$m\widehat{BD} = 40^\circ$$

$$y = 130$$

$$\frac{90 + CD}{2} = 130$$

$$90 + CD = 260$$

$$m\widehat{CD} = 170^\circ$$



Write here ALL the formulas for this chapter and a diagram:



$$\frac{B + L}{2} = x$$



$$\frac{B - L}{2} = x$$



Still need help with: