

Bell Work

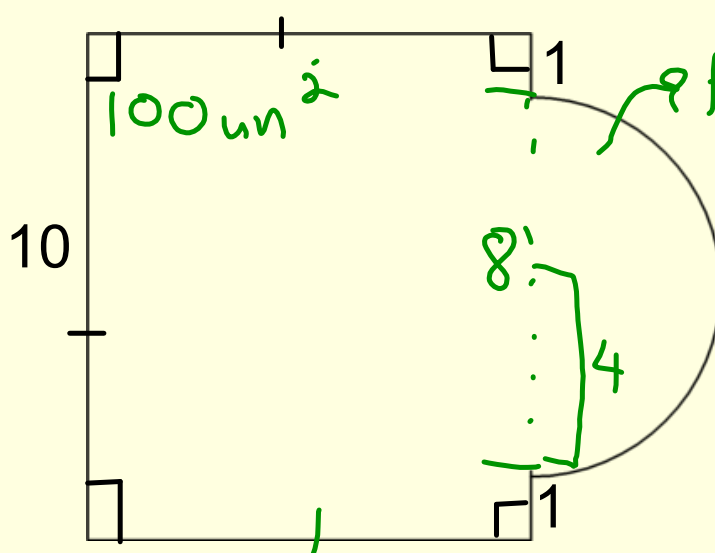
$$A_c = \frac{\pi r^2}{2}$$

Find the area of the region

$$100 + 8\pi$$

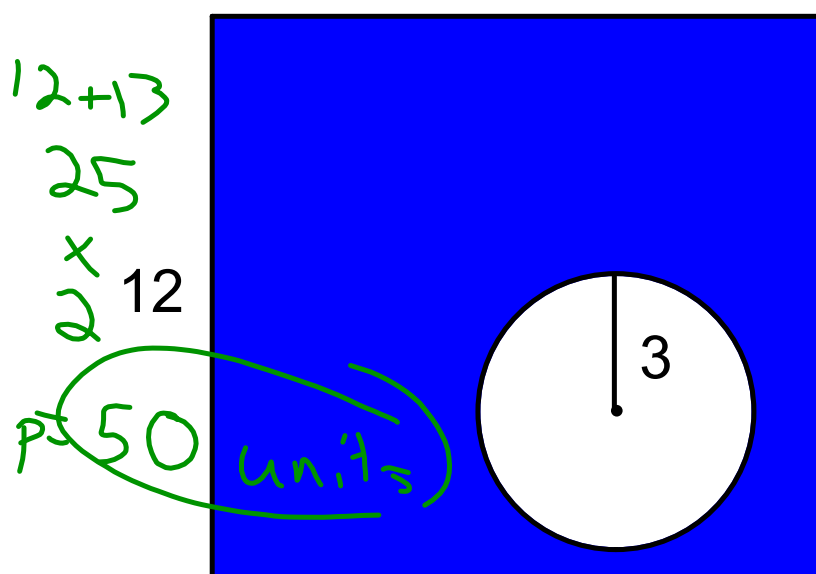
$$100 + 25.1$$

$$125.1 \text{ in}^2$$



$$A_c = \frac{\pi (4)^2}{2}$$

$$= \frac{16\pi}{2} = 8\pi$$



Find the area
of the shaded
region

$$A_R = 12 \times 13$$

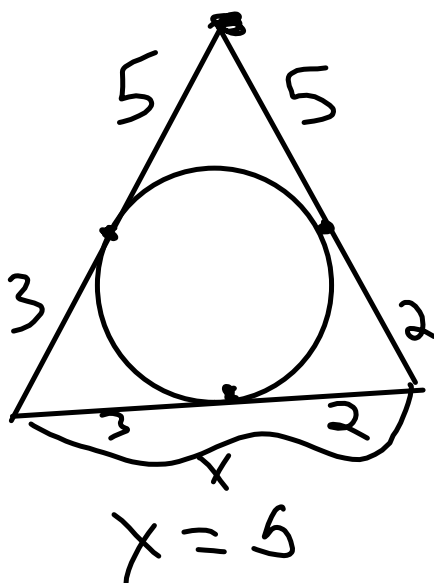
$$A_R = 156$$

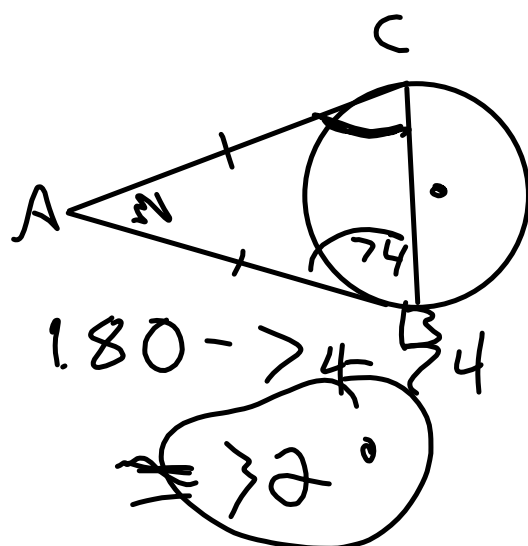
$$A_C = \pi(3^2)$$

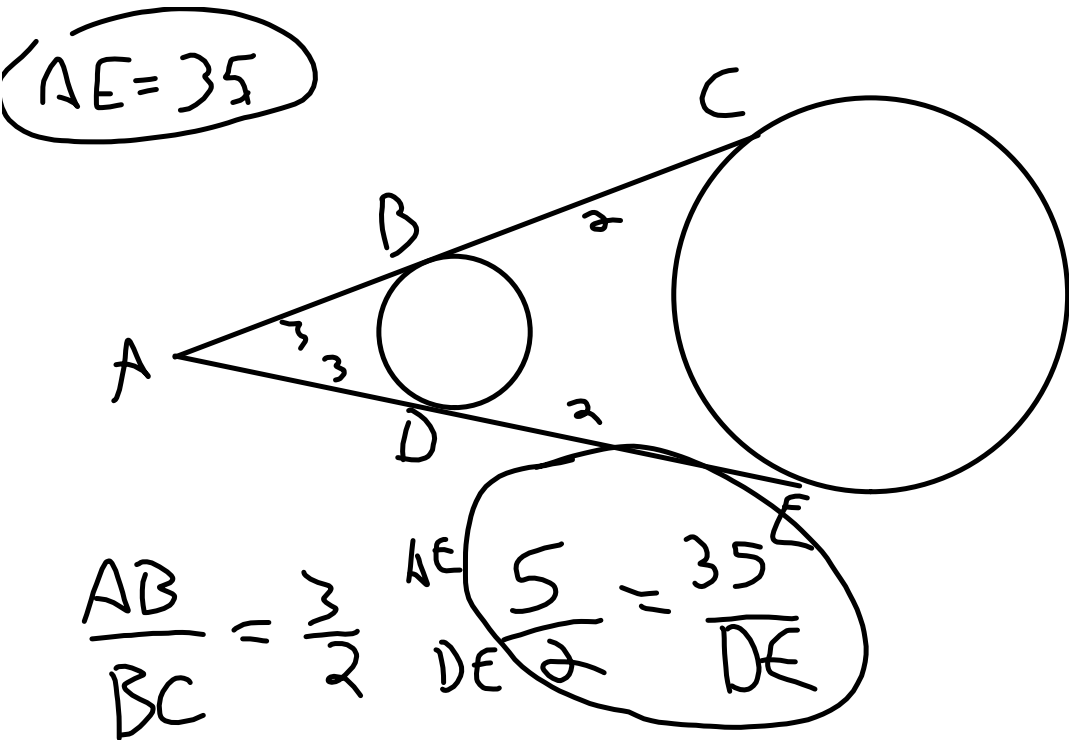
$$A_S = 156 - 9\pi$$

$$A_S = 127.6\ units^2$$

7







Lesson 10.2 Arcs Measures & Length

Objectives:

- Understand the difference between arcs and angles
- Understand that if an angle is measured in degrees, then the arc will be measured in degrees.
- Be able to find arc lengths
- Be able to define and identify the types of arcs and a central angle

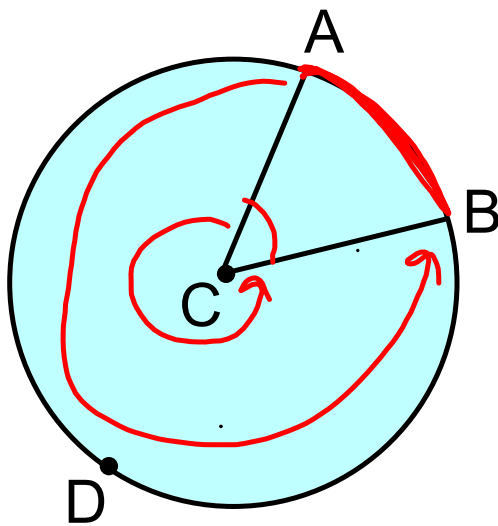
Prior Knowledge:

- degrees in a circle, basic algebra, pythagorean theorem

G.CO.1 - know precise definitions of angle, circle and distance around a circular arc

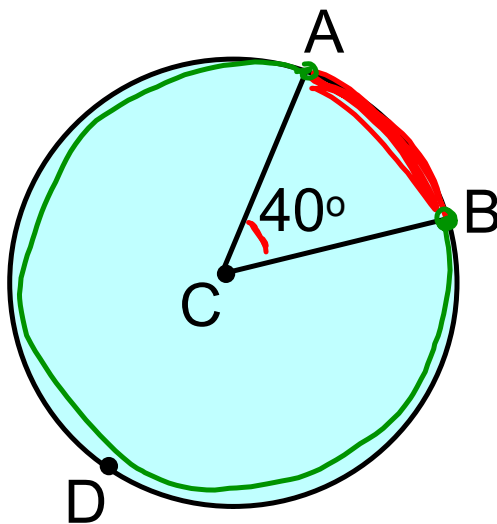
Central Angle - angle whose vertex is the center of a circle

$$m\angle ACB = m\widehat{AB}$$



measure of central \angle = measure of its intercepted arc.

Measures and Naming of Arcs



arc - part of a circle

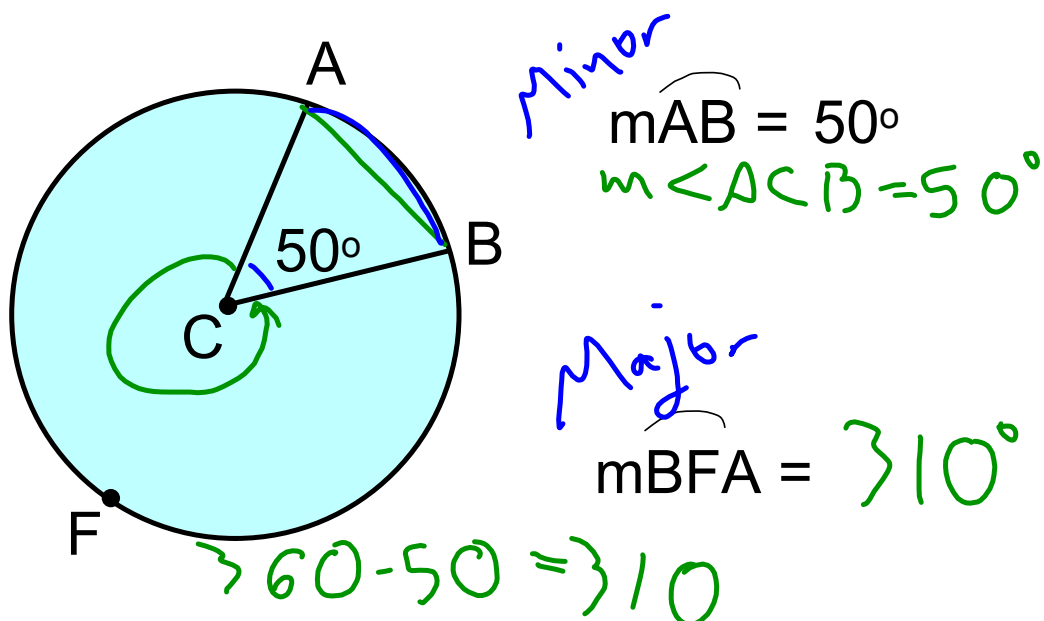
Named by points:

1. **minor arc** named by 2 points and has a measure $\leq 180^\circ$

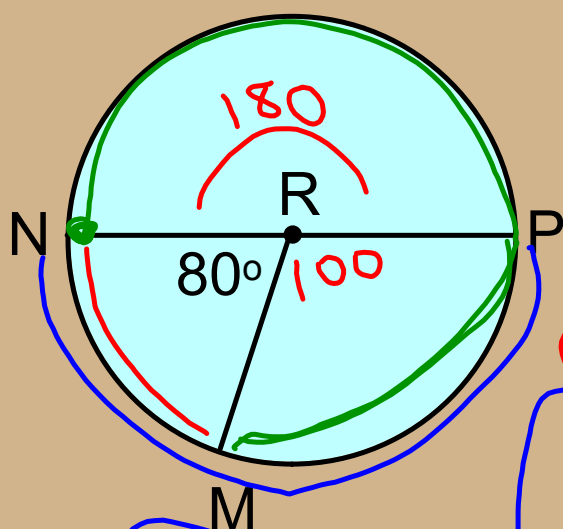
2. **major arc** named by 3 points and has a measure $> 180^\circ$

3. **semicircle** is an arc with endpoints of a diameter.

Measures and Naming of Arcs



Measures and Naming of Arcs



Find the measure of each arc of circle R

a. $m\widehat{MN} = 80^\circ$

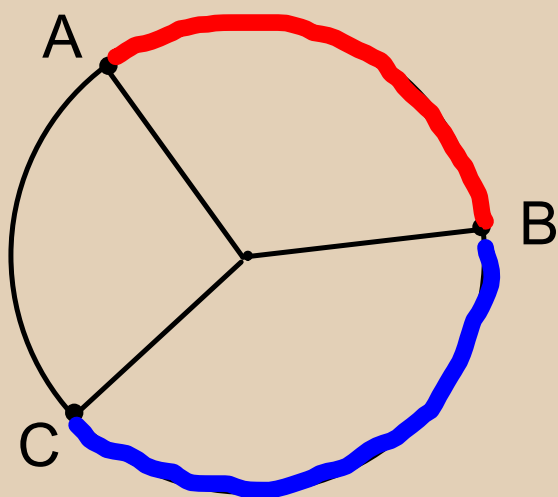
b. $m\widehat{MPN} = 280^\circ$

c. $m\widehat{PMN} = 180^\circ$

a. $m\widehat{MP} = 100^\circ$
Minor

Major

Part + Part = Whole for Arcs.....

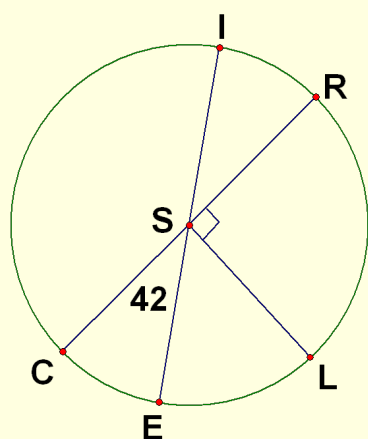


$$m\widehat{ABC} = m\widehat{AB} + m\widehat{BC}$$

Circles

Angles and Arcs

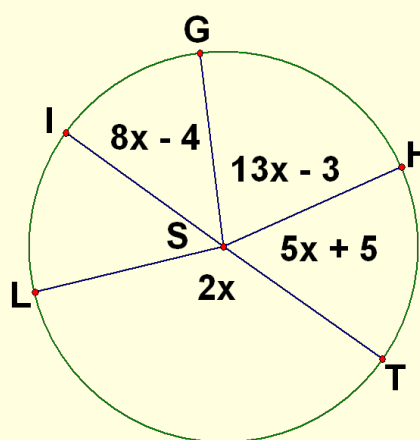
Central Angles:



$$m\widehat{IR} =$$

$$m\widehat{IRL} =$$

$$m\widehat{IRE} =$$



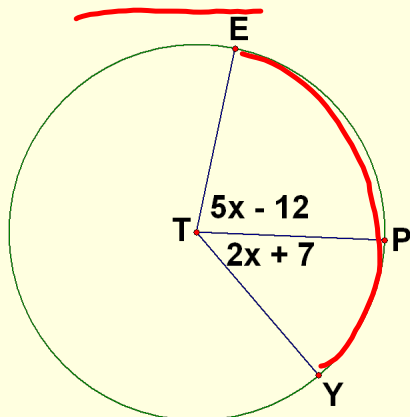
solve for x

find $m\widehat{IL}$

Circles

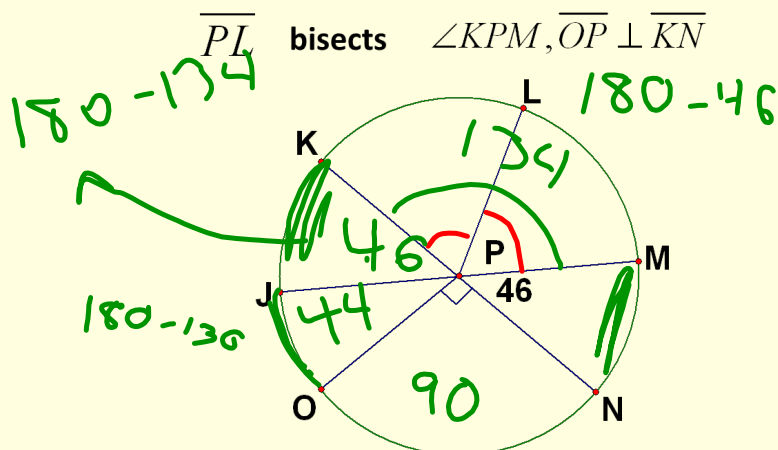
Angles and Arcs

Arc EPY is 164



solve for x

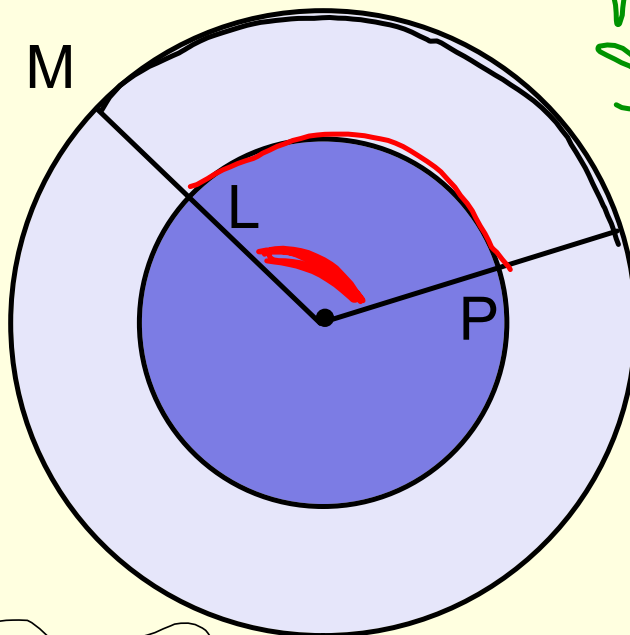
$$\begin{aligned}
 m\angle ETP &= m\widehat{EP} \\
 5x - 12 + 2x + 7 &= 164 \\
 7x &= 169 \\
 x &= 24.1
 \end{aligned}$$



find the measure of all minor arcs

$$\begin{aligned}
 m\widehat{MN} &= 46 \\
 m\widehat{ON} &= 90 \\
 m\widehat{LM} &= 134 \\
 m\widehat{HL} &= m\widehat{LN} = 62
 \end{aligned}$$

Arc Measures and Arc Length



$m\widehat{MN} = m\widehat{LP}$
 Same measure,
 not always
 congruent

is $\widehat{MN} \cong \widehat{LP}$?

Same measure vs Congruence

$$\sqrt{9} = 3$$

$$9^{\left(\frac{1}{2}\right)} = 3$$

$$\textcircled{X^7} = \#$$

$$\#^{\left(\frac{1}{7}\right)} = X$$

Attachments

Lesson 10.2 practice_c.pdf

Lesson 11.2 practice_c.pdf