

Name \_\_\_\_\_ Per \_\_\_\_\_

LO: I can identify relationships with arc measures and chords and use them to solve problems.

 **DO NOW** On the back of this packet (1) **Circles and arc measure**<http://tube.geogebra.org/student/m57642>

Use the website link for 10.4 (see above or use the QR code at right) to investigate the relationship between angles formed by intersecting chords and the arcs they intercept. Complete a sketch for below that shows possible measures for the intercepted arcs when the vertical angles are  $40^\circ$ . Be sure to label the vertical angles  $40$  degrees and the intercepted arcs with possible measures.

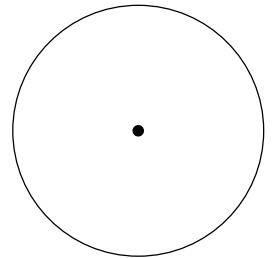
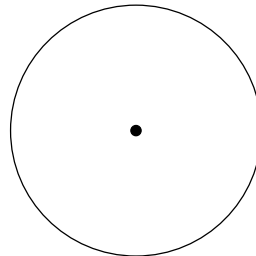
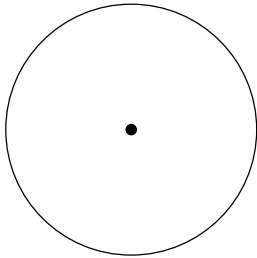


Two chords intersect and the pair of vertical angles formed are each  $40^\circ$ . The measures for the intercepted arcs could be:

\_\_\_\_\_ and \_\_\_\_\_

\_\_\_\_\_ and \_\_\_\_\_

\_\_\_\_\_ and \_\_\_\_\_

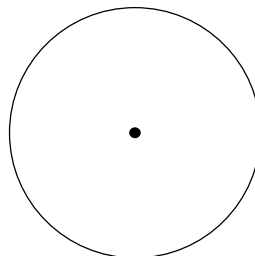


Write a sentence that summarizes the relationship between the measure of the vertical angles formed by two chords and the arcs intercepted by them. Include a labeled diagram and an equation showing the relationship.

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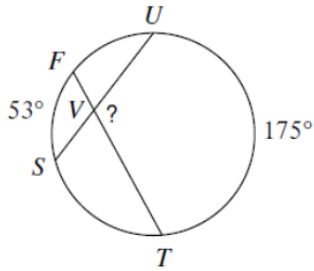
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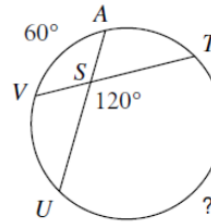
Write an equation that relates the angle and arc measures: \_\_\_\_\_

□ (2) Use what you know about **congruent chords** and **parallel chords** to find the indicated measures.

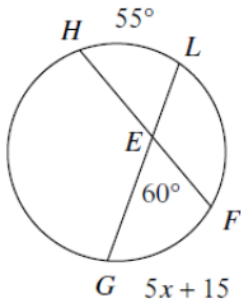
(a) Find the measure of “?”



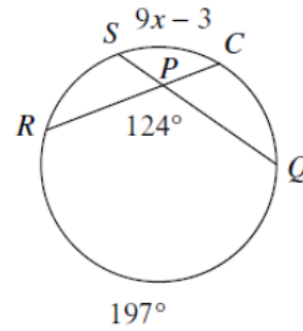
(b) Find the measure of “?”



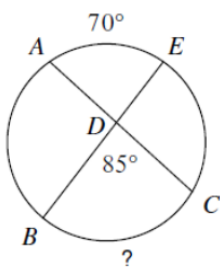
(c)



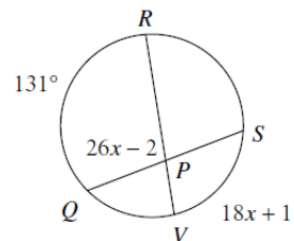
(d)



(e)



(f) Find  $m\angle QPR$



(6) Exit Ticket

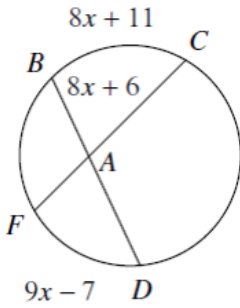
calculator

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(7) Homework

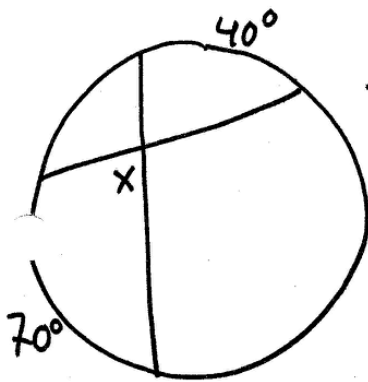
calculator

(1) Find  $m\widehat{BC}$



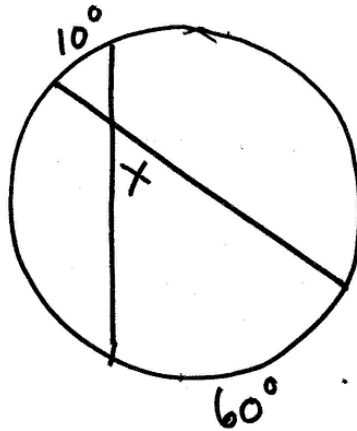
(2) Find the measure of  $x$  for each diagram

(13)



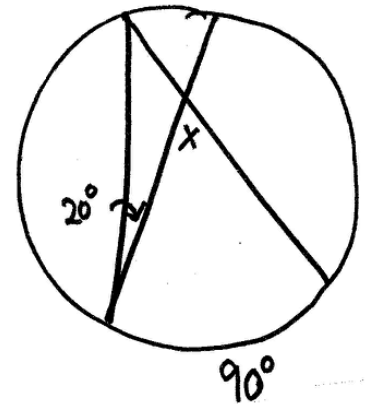
$x = \underline{\hspace{2cm}}$

(14)



$x = \underline{\hspace{2cm}}$

(15)

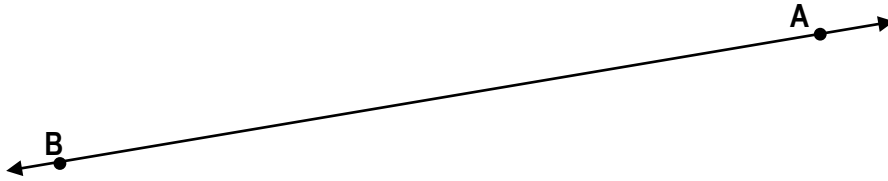


$x = \underline{\hspace{2cm}}$

(7)  
calculator

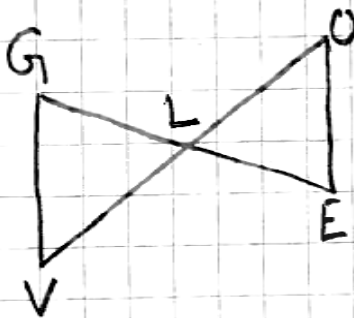
### Homework

(3) Review: Construct a line parallel to line BA that passes through point C. There are a few ways to do this.



c

(3) ① Given:  $\overline{GL}$  bisects  $\overline{OV}$   
 $\overline{GV} \parallel \overline{OE}$   
 $\overline{GV} \cong \overline{OE}$   
 Prove:  $\triangle GLV \cong \triangle ELO$

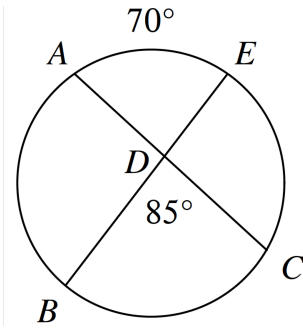


Exit Ticket Name \_\_\_\_\_ Date \_\_\_\_\_ Per \_\_\_\_\_ 10.4R

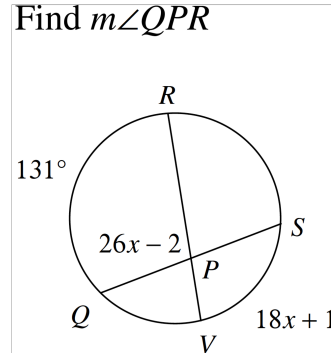
The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

(1) Find the indicated measure for each diagram.

(a) Measure of arc  $BC =$  \_\_\_\_\_



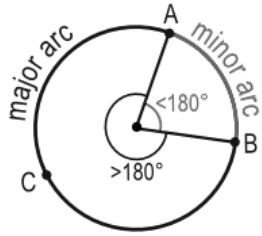
(b) Find  $m\angle QPR$



DO NOW Name \_\_\_\_\_ Date \_\_\_\_\_ Per \_\_\_\_\_

10.4R

(1) Below is a diagram that shows what major and minor arcs are. Draw a diagram and label it with appropriate arc measures so that you have a major arc and a minor arc in the diagram.



(2) Sketch a circle with circumference =  $8\pi$ . Draw and label the length of the radius.

(2) Review: When a segment is dilated, one of two things can result.

Either the segment and image \_\_\_\_\_

OR, the segment and image \_\_\_\_\_