Geometry Regents Lomac 2015-2016 Date 5/12 due 5/13	Circles: Arcs and Angles with 10.5R Intersecting Secants and Tangents

Name _____ **Per**_____

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

☐ **DO NOW**   On the back of this packet

☐ (1)   **Circles and arc measure**   **http://tube.geogebra.org/student/m37768**

Use the website link for 10.5 (see above or use the QR code at right) to investigate the relationship between angles formed by intersecting intersecting secants and tangents and the arcs they intercept. Complete a sketch for each example.

Two secants, or a secant and tangent, or 2 tangents intersect a circle. Write relationships between the angle and intercepted arcs.
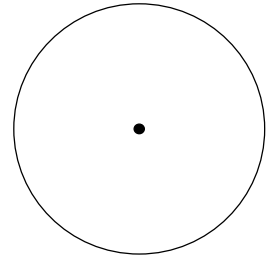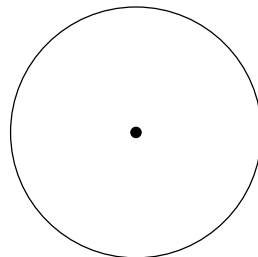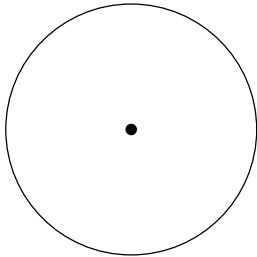
| 2 Secants	2 tangents	1 secant 1 tangent
_____, _____, _____	_____, _____, _____	_____, _____, _____
angle, small arc, big arc	angle, small arc, big arc	angle, small arc, big arc

Write a sentence that summarizes the relationship between the measure of an angle formed by secants and/or tangents and the arcs intercepted by it. Include a labeled diagram and an equation showing the relationship.
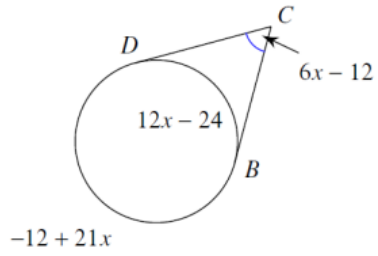
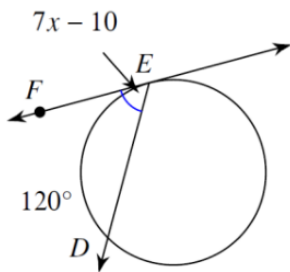_____

_____

Equation:_____

2 secants	1 secant 1 tangent	2 tangents
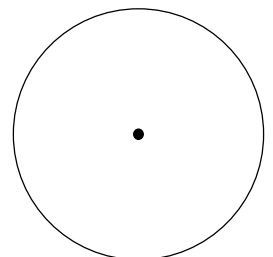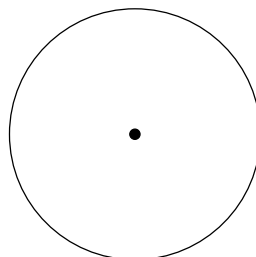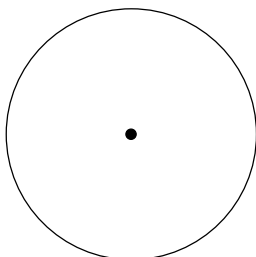
☐ (2)   Find the value of the variable or indicated arc or angle measure.

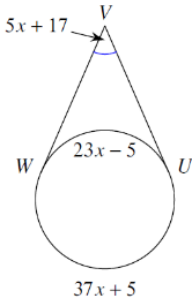(a)   Find $m\widehat{BD}$

D

C

$6x - 12$

$12x - 24$

B

$-12 + 21x$

(b)

$7x - 10$

E

F

$120°$

D

(c)

D

$5x - 10$

E

$60°$ C

R

B

$13x + 7$
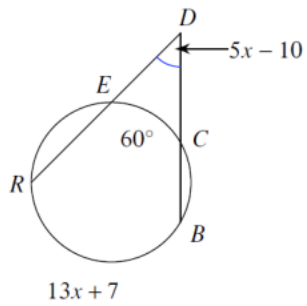
□ (6)   **Exit Ticket**

calculator

ON THE LAST PAGE

□ (7)   **Homework**

calculator

(1) Find the measure of angle V.

$5x + 17$

$23x - 5$

W   U

$37x + 5$

(2) Find the measure of x

$16x + 4$

C

B

A

$38x + 2$
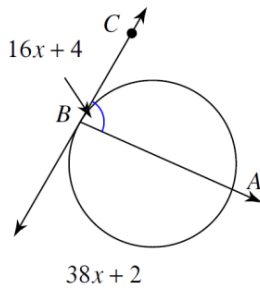
(3) Find the measure of arc QS
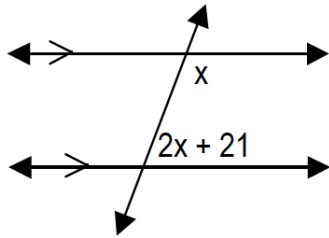
$12x + 8$

D

P

$4x + 4$

S

Q

R
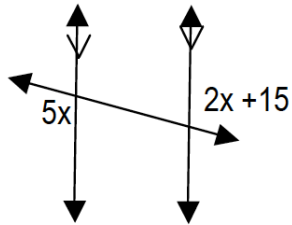
$50°$
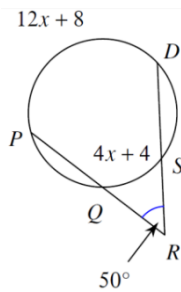
☐ (7) **Homework**
calculator

(3) Review:

Identify a relationship, write an equation or equations, solve for x.
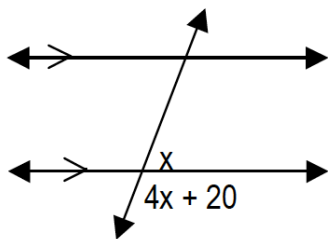
(1)

(2)
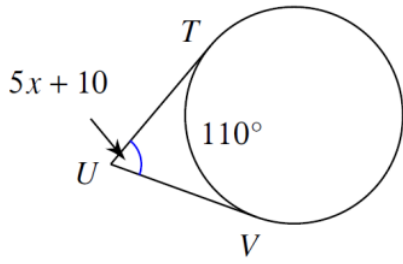

(3)

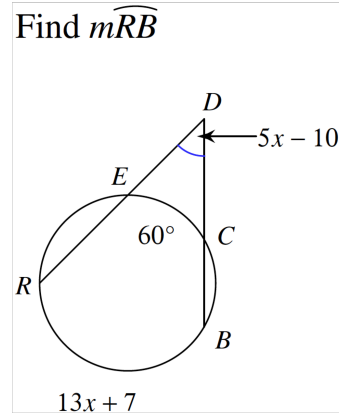**Exit Ticket**   **Name**_____ **Date** _____ **Per**_____   **10.5R**

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. Show sufficient evidence of your solution
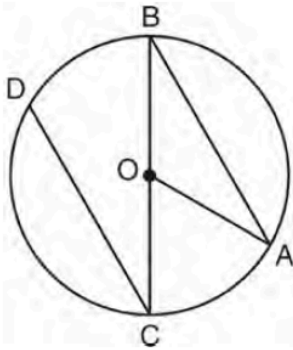
(a) x = _____

T

$5x + 10$

$110°$

U

V

(b) Find $m\widehat{RB}$

D

$5x - 10$

E

$60°$ C

R

B

$13x + 7$

DO NOW   Name_____ Date _____ Per_____   10.5R

(1) 45   In the diagram below of circle O with diameter $\overline{BC}$
      and radius $\overline{OA}$, chord $\overline{DC}$ is parallel to chord $\overline{BA}$.

If m∠BCD = 30°, determine and state m∠AOB.

(2) Review: Rigid motions preserve _____ and _____