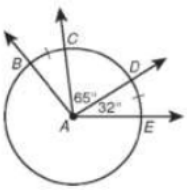
Geometry
HW 12-~~6~~

Name_____
Period_____ Date_____

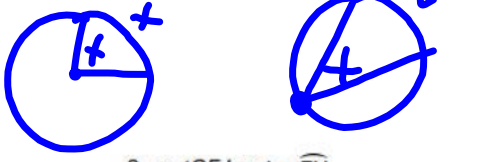
Answer the following.

1. The measure of a central angle is 60°. What is the measure of its minor arc? 60°
2. What will be the sum of a central angle's minor arc and major arc? 360°
3. Congruent arcs have congruent chords.

Use circle *A* to find each measure.

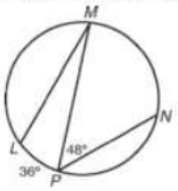


4. $m\overset{\frown}{DE}$ 32°
5. $m\overset{\frown}{CBE}$ 263°
6. $m\overset{\frown}{EBD}$ 328°
7. $m\overset{\frown}{CBD}$ 295°
8. $m\angle CAB$ 32°
9. $m\overset{\frown}{CD}$ 65°



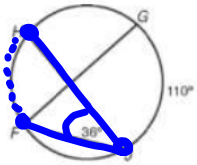
Find each measure.

1. $m\angle LMP$ and $m\overset{\frown}{MN}$



18°, 96°

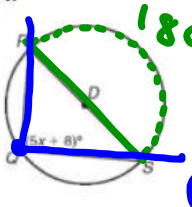
2. $m\angle GFJ$ and $m\overset{\frown}{FH}$



55°, 72°

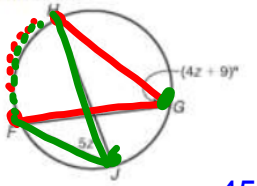
Find each value.

3. *x*

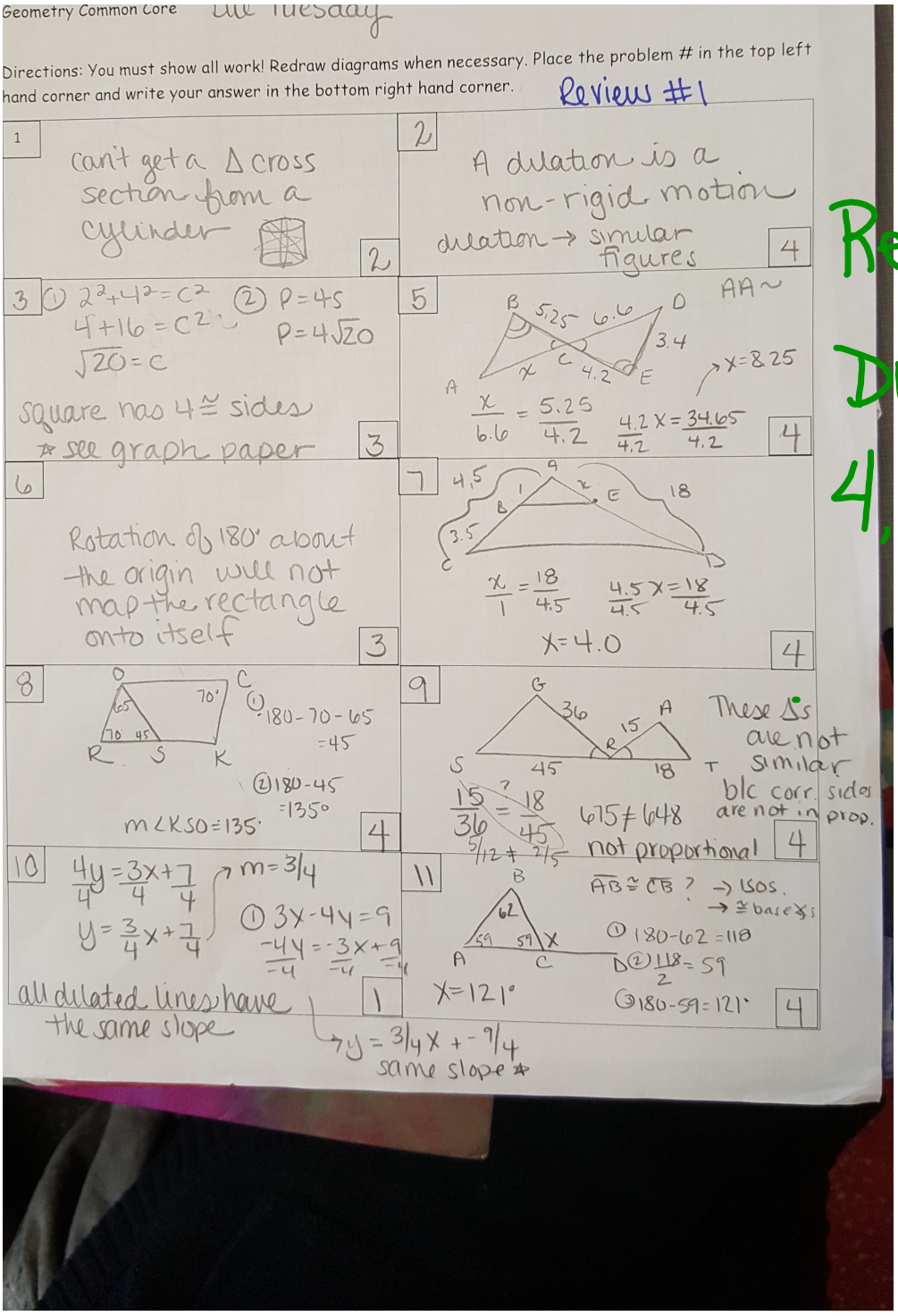


180
$5x+8=90$
82/5
16.4

4. $m\angle FJH$



$4z+9=5z$
$z=9$
45°

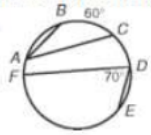


Rev. #2

Due Tues.

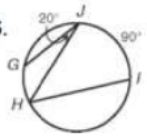
4.12-20

Find each measure.

5. 

$m\angle BAC =$ 30°

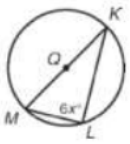
$m\overset{\frown}{FE} =$ 140°

6. 

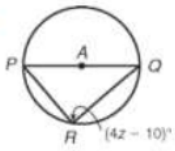
$m\angle IHJ =$ 45°

$m\overset{\frown}{GH} =$ 40°

Find each value.

7. 

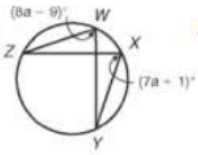
$x =$ 15

8. 

$z =$ 25

9. 

$m\angle VUS =$ 42°

10. 

$m\angle ZWY =$ 31°

11. Convert the circle from General Form to Standard Form:

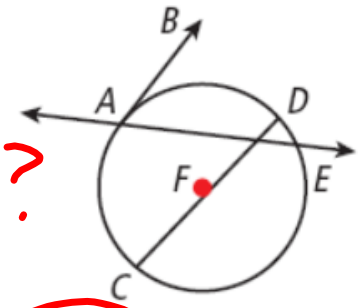
$x^2 + y^2 + 2x + 4y - 11 = 0$

$(x+1)^2 + (y+2)^2 = 16$

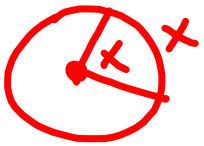
Class Notes 7: **Angle Relationships in Circles**

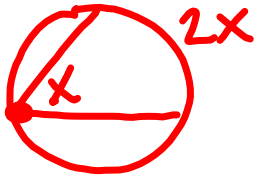
Warm-up

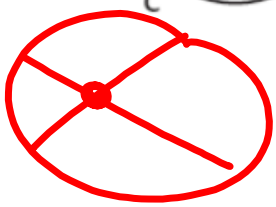
1) Identify each line or segment that intersects circle F.



Where's the vertex?



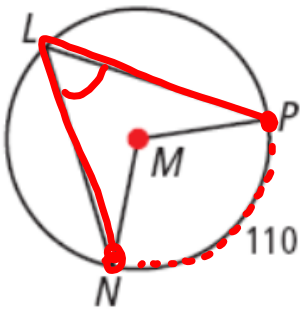




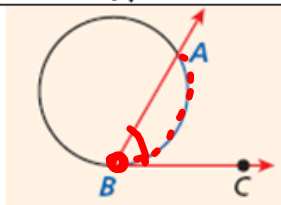
Find each measure.

2) m< NMP 110°

3) m< NLP 55°



ANGLES ON THE CIRCLE:

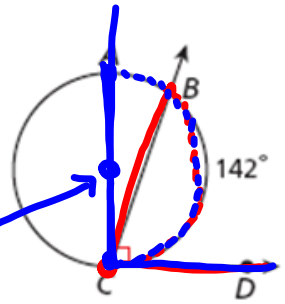
Theorem	Hypothesis	Conclusion
If a tangent and a secant (or chord) intersect on a circle at the point of tangency, then the measure of the angle formed is half the measure of its intercepted arc.	 Tangent $\overrightarrow{BC}$ and secant $\overrightarrow{BA}$ intersect at B.	$m\angle ABC = \frac{1}{2}(\overset{\frown}{AB})$

Example 1: Using Tangent-Secant and Tangent-Chord Angles

Find each measure.

A $m\angle BCD$ $\frac{1}{2}(142) = 71°$

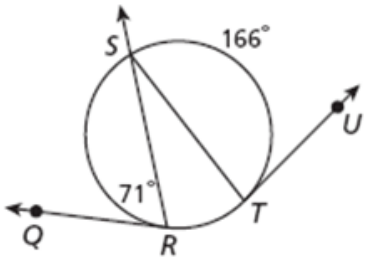
B $m\overset{\frown}{ABC}$ $180°$ $\overline{AC}$ is a diameter ON



TRY IT!!

Find each measure.

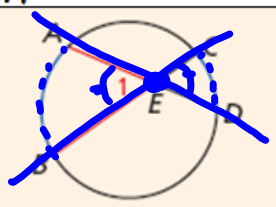
1) m<STU



2) $\text{m}\overset{\frown}{SR}$

ANGLES INSIDE THE CIRCLE:

Vertex → IN

Theorem	Hypothesis	Conclusion
If two secants or chords intersect in the interior of a circle, then the measure of each angle formed is half the sum of the measures of its intercepted arcs.	 Chords $\overline{AD}$ and $\overline{BC}$ intersect at E.	$m\angle 1 = \frac{1}{2}(m\overset{\frown}{AB} + m\overset{\frown}{CD})$

Example 2: Finding Angle Measures Inside a Circle

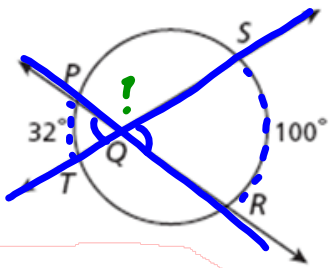
Find each angle measure.

$m\angle SQR$

$= \frac{1}{2}(100+32)$

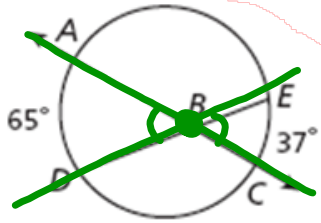
$= 66°$

$m\angle PQS = 180-66 = 114°$



TRY IT!! Where's the vertex?

Find each angle measure.



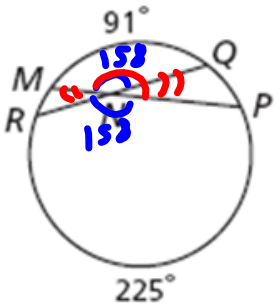
↑ IN

1) m<ABD

$= \frac{1}{2}(65+37)$

$= \frac{1}{2}(102)$

m<ABD = 51°



2) m<RNM $= \frac{1}{2}(91+225)$

$= 158°$

m<RNM = 180 − 158 = 22°

12-7

X top

2 quest on back