

October 23, 2018, Tuesday  
 Draw a circle and a secant line.  
 Draw a circle and a tangent line.

Oct 17-2:06 PM

Geometry Name: \_\_\_\_\_ ID: 1  
 Central Angles  
 Name the arc made by the given angle.  
 1)  $\angle AOC$  → Major arc  $\widehat{AC}$   
 2) Major arc for  $\angle QGH$  →  $\widehat{GH}$   
 Name the central angle of the given arc.  
 3)  $\widehat{AC}$  →  $\angle AOC$  or  $\angle COA$   
 4)  $\widehat{GH}$  →  $\angle G$   
 Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.  
 5)  $\angle P = 160^\circ$   
 6)  $\angle P = 90^\circ$   
 7)  $m\angle SRT = 70^\circ$   
 8)  $m\angle FHE = 65^\circ$

Oct 23-7:56 AM

Review!

$A + C = 180$   
 $B + D = 180$

Oct 23-11:01 AM

Geometry Name: \_\_\_\_\_ ID: 1  
 Central Angles  
 Name the arc made by the given angle.  
 1)  $\angle MQE$   
 2) Major arc for  $\angle QGH$   
 Name the central angle of the given arc.  
 3)  $\widehat{AC}$   
 4)  $\widehat{GH}$   
 Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.  
 5)  $160^\circ$   
 6)  $90^\circ$   
 7)  $m\angle SRT = 70^\circ$   
 8)  $m\angle FHE = 65^\circ$

Oct 23-7:56 AM

Copy p 670 - inscribed Quadrilateral Theorem

Supplementary =  $180^\circ$

What does this theorem mean related to this picture?

$A + C = 180$   
 $B + D = 180$

Oct 23-7:57 AM

Geometry Name: \_\_\_\_\_ ID: 1  
 Inscribed in a Circle  
 Find the measure of the arc or angle indicated.  
 1) Inscribed  $\angle$   
 2) Inscribed  $\angle$   
 3) Inscribed  $\angle$   
 4) Inscribed  $\angle$   
 5) Inscribed  $\angle$   
 6) Inscribed  $\angle$

Oct 23-8:00 AM

Oct 23-8:00 AM

Geometry Name \_\_\_\_\_ ID: 1  
 Inscribed in a Circle Date \_\_\_\_\_ Period \_\_\_\_\_

Find the measure of the arc or angle indicated.

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Oct 23-8:01 AM

October 24, 2018, Wednesday

Find the measure of the arc or angle indicated.

Oct 24-7:44 AM

**The Tangent-Secant Exterior Angle Measure Theorem**  
 If a tangent and a secant, two tangents, or two secants intersect in the exterior of a circle, then the measure of the angle formed is half the difference of the measures of its intercepted arcs.

$m\angle 1 = \frac{1}{2}(m\widehat{AD} - m\widehat{BC})$      $m\angle 2 = \frac{1}{2}(m\widehat{EHG} - m\widehat{EG})$      $m\angle 3 = \frac{1}{2}(m\widehat{KN} - m\widehat{KM})$

**Angle Relationships in Circles**

Vertex of the Angle	Measure of Angle	Diagrams
On a circle	Half the measure of its intercepted arc	
Inside a circle	Half the sum of the measures of its intercepted arcs	
Outside a circle	Half the difference of the measures of its intercepted arcs	

Oct 23-11:55 AM

**The Tangent-Secant Exterior Angle Measure Theorem**  
 If a tangent and a secant, two tangents, or two secants intersect in the exterior of a circle, then the measure of the angle formed is half the difference of the measures of its intercepted arcs.

$m\angle 1 = \frac{1}{2}(m\widehat{AD} - m\widehat{BC})$      $m\angle 2 = \frac{1}{2}(m\widehat{EHG} - m\widehat{EG})$      $m\angle 3 = \frac{1}{2}(m\widehat{KN} - m\widehat{KM})$

**Angle Relationships in Circles**

Vertex of the Angle	Measure of Angle	Diagrams
On a circle	Half the measure of its intercepted arc	
Inside a circle	Half the sum of the measures of its intercepted arcs	
Outside a circle	Half the difference of the measures of its intercepted arcs	

So, what do you notice???

If the  $\angle$  is outside of the  $\odot$  → large arc - small arc  
 If the  $\angle$  is inside of the  $\odot$  → +

Oct 24-10:50 AM

Geometry Name: \_\_\_\_\_ ID: 1  
Circles, Secant & Tangents Date: \_\_\_\_\_ Period: \_\_\_\_\_  
Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

1)  $\frac{360}{2} - 100 = 260 - 100 = 160$   
 $? = \frac{1}{2}(260 - 100) = 80$

2)  $\frac{360}{2} - 110 = 235 - 110 = 125$   
 $? = \frac{1}{2}(235 - 110) = 62.5$

3) Inscribed  $\angle$   
 $\frac{92}{2} = 46$

5)  $? = \frac{1}{2}(190 - 50) = 70$

6)  $? = \frac{1}{2}(195 - 111) = 42$

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7)  $? = \frac{1}{2}(arc + arc) = \frac{1}{2}(111 + 160) = 135.5$

8)  $? = \frac{1}{2}(160 + 62) = 111$

9)  $? = \frac{1}{2}(119 - 50) = 34.5$

10)  $? = \frac{1}{2}(119 - 50) = 34.5$

11)  $? = \frac{1}{2}(190 - 50) = 70$

12)  $? = \frac{1}{2}(195 - 111) = 42$

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Geometry Name: \_\_\_\_\_ ID: 1  
Circles, Secant & Tangents Date: \_\_\_\_\_ Period: \_\_\_\_\_  
Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

1)  $80^\circ$

2)  $55^\circ$

3)  $46^\circ$

4)  $34.5^\circ$

5)  $70^\circ$

6)  $42^\circ$

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7)  $111^\circ$

8)  $111^\circ$   
 $? = \frac{1}{2}(arc + arc) = \frac{1}{2}(155 + 65) = 110$

9)  $34.5^\circ$

10)  $34.5^\circ$

11)  $70^\circ$

12)  $42^\circ$

Oct 23-11:57 AM

October 25, Thursday

Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

1)  $\frac{360}{2} - 65 = 295$

2)  $\frac{180}{2} - 92 = 88$

Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

3)  $\angle = \frac{1}{2}(large - sm) = \frac{1}{2}(159 - 79) = 40$

4)  $\angle = \frac{1}{2}(arc + arc) = \frac{1}{2}(200 + 50) = 125$

5) Inscribed!  
 $\frac{1}{2}(180) = 90$

Oct 17-3:23 PM

Unit 4 Study guide for Quiz 1 - are you ready for secants and tangents?

Unit 4  $\frac{1}{2}$  - Angles & Arcs Name: \_\_\_\_\_

Using the diagram, match the exterior with the term that best describes it (Use 1 times!)

- Center
- Chord
- Secant
- Radius
- Point of tangency
- Secant
- Tangent

6.  $AB = 130$

7.  $CD = 50$

8.  $DE = 130$

9.  $EF = 50$

10.  $FG = 130$

11.  $GH = 50$

12.  $HI = 130$

13.  $IJ = 50$

14.  $JK = 130$

Find the measure of the indicated arc(s) or angle(s).

15.  $x = \frac{1}{2}(75 + 105) = 90$

16.  $\angle 1 = \frac{1}{2}(100 - 60) = 20$

17.  $\angle 1 = \frac{1}{2}(100 - 60) = 20$

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18. What is the value of  $x$ ? **50**

19. Find angle  $x = 110$ .  $xy = 28$ .  $y + 10z = 188$ .  $x + 7z = 180$ .  $-7z = -20$ .  $x = 110$ .

20. Find angles 1 and 2. **360**, **105**, **65**

21.  $AB = 80$ ,  $BC = 54$ ,  $AC = 72$

24. Determine if  $\overline{AB}$  is tangent to radius  $\overline{BC}$ . **Yes**

$a^2 + b^2 = c^2$   
 $5^2 + 12^2 = 13^2$   
 $25 + 144 = 169$   
 $169 = 169$

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Oct 25-10:07 AM

October 26, 2018, Friday

Solve for  $x$ .

Solve for  $x$ .

If arc  $AB = 40$  & arc  $CD = 20$ , find  $\angle 1$  &  $\angle 2$ .

What is arc  $AB$  & arc  $ACB$ ?

Quiz

Oct 24-12:28 PM

Geometry Name \_\_\_\_\_ ID: 1

Circumference of a circle...what is 'part' of a circumference called?

Find the circumference of each circle.  $C = 2\pi r$ . Round your answer to the nearest tenth.

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Oct 17-3:26 PM

What is an arc length & how it arc length related to circumference of a circle?

Oct 17-3:27 PM

Geometry Name \_\_\_\_\_ ID: 1

Circle circumference to arc length

Find the diameter of each circle. Round your answer to the nearest tenth.

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Find the radius of each circle. Round your answer to the nearest tenth.

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Find the circumference of each circle. Use your calculator's value of  $\pi$ . Round your answer to the nearest tenth.

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Oct 17-3:29 PM

Find the length of each arc. Round your answers to the nearest tenth. Remember arc length is a 'piece' of the circumference.

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