

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) $\angle MQC$ 2) Major arc for $\angle GQH$
 LM minor arc GH major arc
 Name the central angle of the given arc.
 3) \widehat{AC} $\angle AQC$ 4) \widehat{GH} $\angle I$
 Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.
 5) $\angle = 160^\circ$ 6) $\angle = 90$
 7) $m\angle SRT = 70^\circ$ diameter line = 180° 8) $m\angle FHE$ $\angle FHE = 170^\circ$ $\angle GF = 115^\circ$ 65°

Oct 23-7:56 AM

Geometry Name _____ ID: 1
 Central Angles
 Name the arc made by the given angle.
 1) $\angle MQC$ 2) Major arc for $\angle GQH$
 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° 6) 90°
 7) $m\angle SRT = 70^\circ$ 8) $m\angle FHE = 65^\circ$

Oct 23-7:56 AM

Copy p 670 - inscribed Quadrilateral Theorem

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) $97 \times 2 = 194 = ?$ Inscribed \angle
 2) $86 \times 2 = 172$
 3) $2\sqrt{x} = 99 \times 2 = 198$ diameter $\angle = 180 - 68 = 112$
 5) $\angle FDE = 64^\circ = 32^\circ$ 6) $180 - 108 = 72$

Oct 23-8:00 AM

7) $180 - 68 - 92 = 18$ $92 = 46$
 8) $360 - 144 - 135 = 81$ $81 = 42$
 9) $180 - 95 = 85 = ?$
 10) $17 + 180 - 106 = 74$
 Solve for x.
 11) $13x - 8 = 2(24)$
 $13x - 8 = 48$
 $13x = 56$
 $x = \frac{56}{13}$
 Find the measure of the arc or angle indicated.
 13) Find $m\widehat{EG}$ 14) Find $m\widehat{KE}$

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Geometry _____ Name _____ ID: 1
 Inscribed in a Circle _____ Date _____ Period _____
 Find the measure of the arc or angle indicated.

1) 194°

2) 172°

3) 118°

4) 112°

5) 32°

6) 76°

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7) 160°

8) 282°

9) 216°

10) 74°

11) 108°

12) 72°

13) Find $m\widehat{EG}$

14) Find $m\widehat{KJ}$

Oct 23-8:01 AM

Oct 24, 2018, Wednesday

Find the measure of the arc or angle indicated.

1) 88°

2) 90°

3) ? = 150

4) 258°

Oct 23-11:58 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.

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

Angle Relationships in Circles

Vertex of the Angle	Measure of Angle	Diagrams
On a circle	Half the measure of its intercepted arc	$m\angle 1 = 60^\circ$ $m\angle 2 = 100^\circ$
Inside a circle	Half the sum of the measures of its intercepted arcs	$m\angle 1 = \frac{1}{2}(44^\circ + 86^\circ) = 65^\circ$
Outside a circle	Half the difference of the measures of its intercepted arcs	$m\angle 1 = \frac{1}{2}(202^\circ - 78^\circ) = 62^\circ$ $m\angle 2 = \frac{1}{2}(125^\circ - 45^\circ) = 40^\circ$

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So what do you notice????

Angle Relationships in Circles

On a circle: If the \angle is inside the circle, $+$. If the \angle is outside the circle, $-$.

Inside a circle: $m\angle 1 = \frac{1}{2}(44^\circ + 86^\circ) = 65^\circ$

Outside a circle: $m\angle 1 = \frac{1}{2}(202^\circ - 78^\circ) = 62^\circ$, $m\angle 2 = \frac{1}{2}(125^\circ - 45^\circ) = 40^\circ$

central \angle s are $2x$
 inscribed \angle s are x
 opposite \angle s are supplementary

Oct 24-10:51 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) 200°

2) 250°

3) 184°

4) 86°

5) 100°

6) 168°

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7) $\angle = \frac{1}{2}(\text{arc} + \text{arc})$
 $\hat{P} = \frac{1}{2}(62 + 160)$
 $\hat{P} = \frac{1}{2}(222) = 111$

8) $\angle = \frac{1}{2}(\text{arc} + \text{arc})$
 $\angle = \frac{1}{2}(110 + 65)$
 $\hat{P} = \frac{1}{2}(220)$
 $\hat{P} = 110$

9) $\hat{P} = \frac{1}{2}(158)$
 $\hat{P} = 79$

10) $\hat{P} = \frac{1}{2}(100)$
 $\hat{P} = 50$

11) $\angle = \frac{1}{2}(\text{large arc} - \text{small arc})$
 $2(41) = \hat{P} - 64$
 $82 = \hat{P} - 64$
 $146 = \hat{P}$

12) $\hat{P} = \frac{1}{2}(113)$
 $\hat{P} = 56.5$

Oct 23-11:58 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) $\hat{P} = \frac{1}{2}(100)$
 $\hat{P} = 50$

2) $\hat{P} = \frac{1}{2}(110)$
 $\hat{P} = 55$

3) $\hat{P} = \frac{1}{2}(120)$
 $\hat{P} = 60$

4) $\hat{P} = \frac{1}{2}(108)$
 $\hat{P} = 54$

5) $\hat{P} = \frac{1}{2}(140)$
 $\hat{P} = 70$

6) $\hat{P} = \frac{1}{2}(110)$
 $\hat{P} = 55$

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7) $\hat{P} = \frac{1}{2}(111)$
 $\hat{P} = 55.5$

8) $\hat{P} = \frac{1}{2}(110)$
 $\hat{P} = 55$

9) $\hat{P} = \frac{1}{2}(158)$
 $\hat{P} = 79$

10) $\hat{P} = \frac{1}{2}(120)$
 $\hat{P} = 60$

11) $\hat{P} = \frac{1}{2}(140)$
 $\hat{P} = 70$

12) $\hat{P} = \frac{1}{2}(113)$
 $\hat{P} = 56.5$

Oct 23-12:00 PM

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) $\hat{P} = \frac{1}{2}(360)$
 $\hat{P} = 180$

2) $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 92$

3) $\hat{P} = \frac{1}{2}(159)$
 $\hat{P} = 79.5$

4) $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 90$

5) $\hat{P} = \frac{1}{2}(200)$
 $\hat{P} = 100$

6) $\hat{P} = \frac{1}{2}(250)$
 $\hat{P} = 125$

7) $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 90$

8) $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 92$

Oct 24-12:27 PM

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

Unit 4 56.1 - Angles & Arcs Name: _____

Circle the correct answer. Match the notation with the term that best describes it. (Use 1-7 only.)

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

In circle M, m∠BAC = 50 and m∠DCE = 90. Arcs \widehat{BC} and \widehat{DE} are diameters. Find the measure of each arc or angle.

- $\widehat{BC} = 180$
- $\widehat{DE} = 180$
- $\widehat{BD} = 90$
- $\widehat{CE} = 90$
- m∠ABC = 130
- m∠DEC = 130

Find the measure of the indicated arc or angle.

15. $\hat{P} = \frac{1}{2}(140)$
 $\hat{P} = 70$

16. $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 90$

17. $\hat{P} = \frac{1}{2}(100)$
 $\hat{P} = 50$

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

19. Find angle x. $x = 78$

20. Find angles 1 and 2. $\hat{P} = \frac{1}{2}(120 - 70)$
 $\hat{P} = \frac{1}{2}(50)$
 $\hat{P} = 25$

21. $\widehat{AB} = 180$, $\widehat{BC} = 54$, $\widehat{CE} = 126$
 $\widehat{DE} = 180$
 $\hat{P} = \frac{1}{2}(180)$
 $\hat{P} = 90$

22. Determine if \widehat{AB} is tangent to radius \widehat{BC} .
 $a^2 + b^2 = c^2$
 $5^2 + 12^2 = 13^2$
 $25 + 144 = 169$
 $169 = 169$
 Yes, tangent

Oct 25-10:08 AM

October 26, 2018, Friday

Solve for x.

$m \widehat{AC} = 178$
 $m \widehat{CH} = 102$

Solve for x.

tangent C
 148°

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

What is arc AB & arc ACB?

52°

Quiz

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Geometry Name: _____ ID: 1

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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.

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)
- 8)

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

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Geometry Name: _____ ID: 1

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Circle circumference to arc length

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

- 1)

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

- 2)

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

- 3)
- 4)

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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.

- 5)
- 6)
- 7)
- 8)
- 9)
- 10)
- 11)
- 12)

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Oct 17-3:34 PM