

October 15, 2018 Monday

1 What does SOHCAHTOA help you remember...write the equations out in their entirety.
 $\sin \theta = \frac{o}{h}$ $\cos \theta = \frac{a}{h}$ $\tan \theta = \frac{o}{a}$

2 If the distance from the tree to the student is 10 feet, and the tree is 12 foot high, what is the student's angle of elevation?

$\tan \theta = \frac{o}{a}$
 $\tan \theta = \frac{12}{10}$
 $x = 50^\circ$

3 A lost ranger is seen by his partner in a lookout tower, if the partner's angle of depression is 50 degrees, how far is the ranger from the lookout tower?

$\tan \theta = \frac{o}{a}$
 $45 \tan 50 = \frac{x}{45}$
 $53 = x$

Oct 11-2:32 PM

Unit 3 Test Study Guide

1. EC = 12, $\sin \theta = \frac{12}{h}$, $\cos \theta = \frac{a}{h}$, $\tan \theta = \frac{o}{a}$
 $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $x = 67^\circ$, $y = 22^\circ$

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

3. $a^2 + b^2 = c^2$
 $4^2 + 3^2 = 5^2$
 $16 + 9 = 25$
 $25 = 25$
 $c = 5$

4. $a^2 + b^2 = c^2$
 $3^2 + 4^2 = 5^2$
 $9 + 16 = 25$
 $25 = 25$
 $c = 5$

5. $a^2 + b^2 = c^2$
 $6^2 + 8^2 = 10^2$
 $36 + 64 = 100$
 $100 = 100$
 $c = 10$

6. $a^2 + b^2 = c^2$
 $8^2 + 15^2 = 17^2$
 $64 + 225 = 289$
 $289 = 289$
 $c = 17$

7. $a^2 + b^2 = c^2$
 $9^2 + 12^2 = 15^2$
 $81 + 144 = 225$
 $225 = 225$
 $c = 15$

8. $a^2 + b^2 = c^2$
 $12^2 + 16^2 = 20^2$
 $144 + 256 = 400$
 $400 = 400$
 $c = 20$

9. $a^2 + b^2 = c^2$
 $15^2 + 20^2 = 25^2$
 $225 + 400 = 625$
 $625 = 625$
 $c = 25$

10. $a^2 + b^2 = c^2$
 $20^2 + 21^2 = 29^2$
 $400 + 441 = 841$
 $841 = 841$
 $c = 29$

11. The top of a waterfall is 18 ft above the ground. The angle of depression from the top of the water (where the waterfall is) to the lake is 60 degrees.

$\tan \theta = \frac{o}{a}$
 $\tan 60 = \frac{18}{x}$
 $x \tan 60 = 18$
 $x = \frac{18}{\tan 60}$
 $x = 10.4$

12. A forest ranger is on a fire lookout tower in a national forest. His observation post is 214 ft above the ground. He spots a fire. The angle of depression from his line of sight to the fire is 12 degrees. How far away is the fire from the lookout tower in miles of fire severity?

$\cos \theta = \frac{a}{h}$
 $\cos 12 = \frac{x}{214}$
 $x \cos 12 = 214$
 $x = \frac{214}{\cos 12}$
 $x = 218$

13. Find angles X and Z.

$\sin \theta = \frac{o}{h}$
 $\sin X = \frac{30}{50}$
 $X = 37^\circ$
 $Z = 36^\circ$

16. Find ST.

$\cos \theta = \frac{a}{h}$
 $\cos 20 = \frac{6}{8}$
 $6 \cos 20 = \frac{a}{8}$
 $5.6 = a$

17. $\cos \theta = \frac{a}{h}$
 $\cos 70 = \frac{5.6}{h}$
 $h \cos 70 = 5.6$
 $h = \frac{5.6}{\cos 70}$
 $h = 16.7$
 16.3

October 16, 2018, Tuesday

Test!

Oct 11-2:32 PM

October 17, 2018, Wednesday

P 659-662 define circle vocabulary words (= 8) with picture

Copy:
 arc addition post p 661
 inscribed angle theorem p 662
 inscribed angle of a diameter theorem p 664

Oct 11-3:55 PM

Oct 11-2:32 PM

p664-665

Evaluate: Homework and Practice

Identify the chord(s), inscribed angle(s), and central angle(s) in the figure. The center of the circles in Exercises 1, 2, and 4 is C.

-
-
-
-

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In circle C, $m\widehat{DE} = 84^\circ$. Find each measure.

- $m\angle DGE$
- $m\angle EFD$

The center of the circle is A. Find each measure using the appropriate theorems and postulates.

- $m\widehat{CE}$
- $m\widehat{DE}$
- $m\angle BEC$

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Find each measure using the appropriate theorems and postulates. $m\widehat{AC} = 116^\circ$

- $m\widehat{BC}$
- $m\widehat{AD}$

The center of the circle is C. Find each measure using the appropriate theorems and postulates. $m\widehat{LM} = 70^\circ$ and $m\widehat{NP} = 60^\circ$.

- $m\angle MNP$
- $m\angle LMN$

The center of the circle is O. Find each arc or angle measure using the appropriate theorems and postulates.

- $m\angle BDE$
- $m\widehat{AD}$
- $m\angle DBE$

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Geometry Name: _____ ID: 1
 Central Angles Date: _____ Period: _____

Name the arc made by the given angle.

- $\angle MQE$
- Major arc for $\angle GQH$

Name the central angle of the given arc.

- \widehat{AC}
- \widehat{GH}

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

-
-
- $m\angle SRT$
- $m\angle FHE$

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Geometry Name: _____ ID: 1
 Central Angles Date: _____ Period: _____

Name the arc made by the given angle.

- $\angle MQE$
- Major arc for $\angle GQH$

Name the central angle of the given arc.

- \widehat{AC}
- \widehat{GH}

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

-
-
- $m\angle SRT$
- $m\angle FHE$

Oct 11-3:03 PM

October 18, 2018, Thursday

Oct 11-3:04 PM

Copy p 670 - inscribed Quadrilateral Theorem

What does this theorem mean related to this picture?

Oct 11-3:05 PM

Practice: Quadrilaterals Inscribed in a Circle:
Ex5: Find the value of each variable.

1.

2.

3.

Oct 11-3:14 PM

Use the figure for Exercises 5–6. Find each measure using the appropriate theorems and postulates.

5. $m\angle B$

6. $m\widehat{DAB}$

7. $GHIJ$ is a quadrilateral. If $m\angle HIJ + m\angle HGI = 180^\circ$ and $m\angle H + m\angle J = 180^\circ$, could the points $G, H, I,$ and J points of a circle? Explain.

8. $LMNP$ is a quadrilateral inscribed in a circle. If $m\angle L = m\angle N$, is \overline{MP} a diameter of the circle? Explain.

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Multi-Step Find the angle measures of each inscribed quadrilateral.

10.

11.

Oct 11-3:17 PM

18. In the diagram, C is the center of the circle and $ZXYZ$ is inscribed in the circle. Classify each statement as true, false, or cannot be determined.

- $\overline{CX} \cong \overline{CY}$
- $\overline{CZ} \cong \overline{XY}$
- $\triangle CXZ$ is isosceles.
- $\triangle CZY$ is equilateral.
- \overline{XY} is a diameter of circle C .



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

Inscribed Angles - tech search for a pic and definition!



How are inscribed angles different from inscribed quadrilaterals?

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



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

3)  4) 

5)  6) 



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

7)  8) 

9)  10) 

Solve for x.

11)  12) 



Find the measure of the arc or angle indicated.



13) Find $m\widehat{EG}$  14) Find $m\widehat{KZ}$ 



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



1)  2) 



3)  4) 

5)  6) 



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

7)  8) 

9)  10) 

Solve for x.

11)  12) 

Find the measure of the arc or angle indicated.

13) Find $m\widehat{EG}$  14) Find $m\widehat{KZ}$ 

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October 19, 2018, Friday

Oct 11-3:26 PM

Use a laptop to find the following:

- Intersecting Chords Angle Measure Theorem
- Tangent-Secant Interior Angle Measure Theorem
- Tangent-Secant Exterior Angle Measure Theorem (there should be three)
- Angle Relationships in Circles (there should be three)

If no tech, use pages 700-702

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What is a secant line?

What is a tangent line?

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The Tangent-Secant Exterior Angle Measure Theorem

If a tangent and a secant, two secants, or two secants extended to the exterior of a circle, then the measure of the angle formed is half the difference of the measures of the intercepted arcs.

$m\angle 1 = \frac{1}{2}(m\widehat{AD} - m\widehat{BC})$ $m\angle 2 = \frac{1}{2}(m\widehat{BD} - m\widehat{AC})$ $m\angle 3 = \frac{1}{2}(m\widehat{AB} - m\widehat{CD})$

Angle Relationships in Circles

Vertex of the Angle	Measure of Angle	Diagrams
On a circle	Half the measure of its intercepted arc	 $m\angle 1 = 60^\circ$ $m\angle 2 = 120^\circ$
Inside a circle	Half the sum of the measures of its intercepted arcs	 $m\angle 1 = \frac{1}{2}(120^\circ + 60^\circ) = 90^\circ$
Outside a circle	Half the difference of the measures of its intercepted arcs	 $m\angle 1 = \frac{1}{2}(120^\circ - 60^\circ) = 30^\circ$ $m\angle 2 = \frac{1}{2}(120^\circ - 60^\circ) = 30^\circ$

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Find each measure.

3. $m\angle QPR$

4. $m\angle ABC$

5. $m\angle MKJ$

6. $m\angle NPK$

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Find the value of x .

11.

12.

13.

Oct 11-3:38 PM

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)

2)

3)

4)

5)

6)

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7)

8)

9)


10)


11)


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
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Geometry _____ Name _____ ID: 1
 © Houghton Mifflin Harcourt Publishing Company Date _____ Period _____
Circles, Secant & Tangents
 Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.


1)  80°

2)  55°

3)  46°


4)  274°


5)  70°


6)  42°


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
7)  111°

8)  110°

9)  79°

10)  120°

11)  146°

12)  41°

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