

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?

$\tan \theta = \frac{o}{a}$
 $\tan \theta = \frac{12}{10}$
 $\tan^{-1} \tan x = \tan^{-1} (\frac{12}{10})$
 $x = 50^\circ$

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

Use the triangle to the right to answer questions 1-4.

1. $BC = 12$, $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

2. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

3. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

4. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
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5. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
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 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

6. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

7. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

8. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

9. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

10. $\sin \theta = \frac{12}{13}$, $\cos \theta = \frac{5}{13}$, $\tan \theta = \frac{12}{5}$
 $\sin \theta = \frac{o}{h} = \frac{12}{13}$
 $\cos \theta = \frac{a}{h} = \frac{5}{13}$
 $\tan \theta = \frac{o}{a} = \frac{12}{5}$

11. The top of a mountain is 14 kilometers above the ground. The angle of depression from the top of the mountain to the base of the mountain is 22° . How long is the slope?

$\cos \theta = \frac{a}{h}$
 $\cos 22 = \frac{x}{14}$
 $x \cos 22 = 14$
 $x = \frac{14}{\cos 22}$
 $x = 15$

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° . How far away is the fire from the lookout tower to the nearest foot?

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

13. Find angles X and Z.

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

16. Find ST.

$\cos \theta = \frac{a}{h}$
 $\cos 30 = \frac{16.7}{18.0}$
 $18.0 \cos 30 = 16.7$
 $16.3 = 16.7$

October 16, 2018, Tuesday

Find the length of the side labeled x. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

1) Find the length of the side labeled x. Round intermediate values to the nearest tenth. Round your final answer to the nearest tenth.

2) Find the measure of the indicated angle to the nearest degree.

3) Find the missing side. Round to the nearest tenth.

Pick 2

Oct 11-2:32 PM

October 17, 2018, Wednesday

Parts of a Circle

Choose from the following to complete the labeled diagram:

| | | |
|----------|---------------|---------|
| Arc | Radius | Tangent |
| Diameter | Sector | Segment |
| Chord | Circumference | |


1st - Read column 1
 2nd - Recap what was read
 2nd - Read column 2 & 3
 1st - Recap what was read
 1st & 2nd Answer 1-4
 Please do not write in books

Oct 11-3:55 PM


Oct 17-11:25 AM

October 17, 2018, Thursday


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

1)  $A = \pi r^2$
 $A = \pi 6^2$
 $A = 36\pi \approx 113.04$
 113.1 km²

Find the circumference of each the nearest tenth.

2)  $C = 2\pi r$
 $C = 2\pi 5$
 31.4 km

Find the diameter of each circle.

3)  $d = 2r$
 12 ft

Oct 17-12:56 PM

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

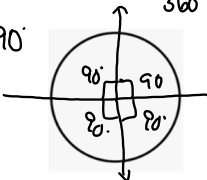
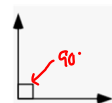

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October 19, 2018, Friday

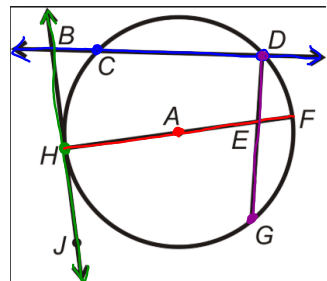
1. How many degrees are in a right angle?
 90°

2. How many degrees are in a straight line?
 180°

3. How many degrees are in a circle?
 $4 \cdot 90^\circ = 360^\circ$

Oct 18-1:04 PM




\overleftrightarrow{BD} = Secant
 \overleftrightarrow{HJ} = Tangent
 \overline{HF} = Diameter
 \overline{DG} = Chord


Oct 18-10:26 AM


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.

1.  cm


2.  AO

3.  mm

4.  AO

chords: $\overline{RS}, \overline{ST}, \overline{SU}, \overline{RT}$
 inscribed angles: $\angle RST, \angle STR, \angle TRS, \angle UST, \angle USR, \angle LUSR$
 central angle: $\angle SCT, \angle ACS, \angle ACD, \angle TCU$

Oct 11-2:55 PM

1. 

Chords: $\overline{ED}, \overline{EF}$
 Inscribed Angles: $\angle FED$
 Central Angles: $\angle DCF$

Oct 18-12:29 PM

3.

Chords: $\overline{DG}, \overline{GE}, \overline{EF}, \overline{DF}$

Inscribed Angles: $\angle DEG, \angle FDG, \angle GFD, \angle DFE, \angle GEF$

Central Angles: NONE

Oct 18-12:30 PM

4.

Chords: $\overline{CA}, \overline{EA}, \overline{AE}$

Central Angles: $\angle BCD, \angle BCE, \angle ECD, \angle ACD, \angle ACB, \angle ECB$

Inscribed Angles: NONE

Oct 18-12:30 PM

D 665 \leftarrow arc $DE = 84^\circ$

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

5. $m\angle DGE = \frac{84}{2} = 42$ 6. $m\angle EFD = \frac{84}{2} = 42$

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

7. $m\widehat{CE} = 180 - 39 = 141$
 $90 + 51 = 141$

minor \rightarrow $m\widehat{DF} = 39 + 90 = 129$

major \rightarrow $m\widehat{BE} = 180 + 141 = 321$
 $= 141 + 39 + 90 + 51 = 360 - 39 = 321$

diameter/line 180°

Oct 11-2:56 PM

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

10. $m\widehat{BC} = 140$

11. $m\widehat{AD} = 48$

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

12. $m\angle MNP = 80$

13. $m\angle LMN = 80$

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

14. $m\angle BDE = 96 + 84 = 180 = 90$

15. $m\widehat{BD} = 20$

16. $m\widehat{ED} = 40$

17. $m\angle ABE = 20$
 $(96 + 96 = 236)$

Oct 11-2:56 PM

MAJOR ARC

Minor Arc

Central \angle

1) $\angle I$

Practice: Name the shaded arc in each picture. Then list whether it is a minor arc, major arc, or a semicircle.

2) $\angle H$

A) $\angle CED$ B) \widehat{CD}

Minor $\widehat{DA}, \widehat{AD}$

A) $\angle AQR$ B) $\angle KQL$
 C) \widehat{HQT} D) $\angle JQT$

Oct 18-10:36 AM

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

Name the arcs made by the given angle.

1) $\angle MQK$ 2) Major arc for $\angle GPH$

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) $\angle PQR$ 6) \widehat{AC}

7) $m\angle SRT$ 8) $m\widehat{FHE}$


Oct 11-3:03 PM


Geometry _____ Name _____ ID: 1
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Central Angles
 Name the arc made by the given angle.

1) $\angle MQP$  **\widehat{MP}**


2) Major arc for $\angle GHI$  **\widehat{GHI}**


Name the central angle of the given arc.


3) \widehat{AC}  **$\angle CAC$**


4) \widehat{GH}  **$\angle HGH$**

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) $m\angle SPT$  **70°**

8) $m\angle PHE$  **65°**

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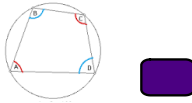
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October 18, 2018, Thursday

Oct 11-3:04 PM

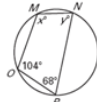
Copy p 670 - inscribed Quadrilateral Theorem

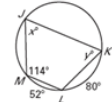
What does this theorem mean related to this picture?

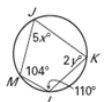


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Practice: Quadrilaterals Inscribed in a Circle:
 Ex5: Find the value of each variable.

1. 

2. 

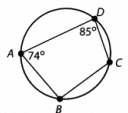
3. 

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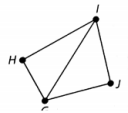
Use the figure for Exercises 5-6. Find each measure using the appropriate theorems and postulates.

5. $m\angle B$

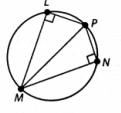
6. $m\widehat{DAB}$



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

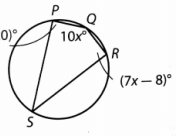


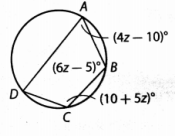
8. $\angle MNP$ is a quadrilateral inscribed in a circle. If $m\angle L = m\angle N$, is \widehat{MP} a diameter of the circle? Explain.



Oct 11-3:16 PM

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 $\angle XYZ$ 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 .

Oct 11-3:17 PM

Inscribed Angles - tech search for a pic and definition!

How are inscribed angles different from inscribed quadrilaterals?

Oct 11-3:17 PM

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

-
-
-
-
-
-

Oct 11-3:23 PM

-
-
-
-

Solve for x .

-
-

Find the measure of the arc or angle indicated.

- Find $m\widehat{EG}$
- Find $m\widehat{KZ}$

Oct 11-3:24 PM

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

- 194°
- 172°
- 118°
- 112°
- 32°
- 79°

Oct 11-3:24 PM

- 46°
- 42°
- 85°
- 74°

Solve for x .

- 12
- 8

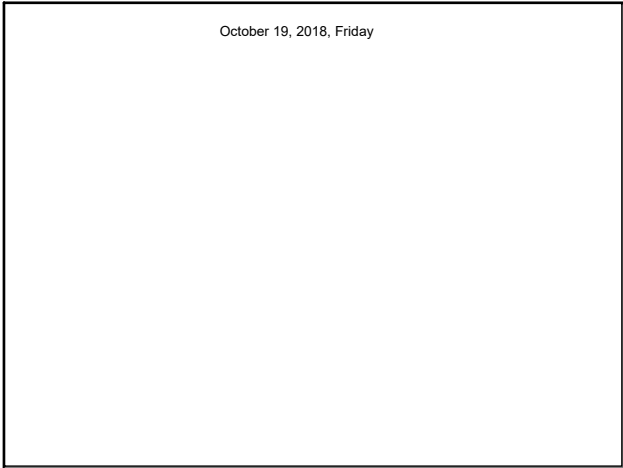
Find the measure of the arc or angle indicated.

- Find $m\widehat{EG}$

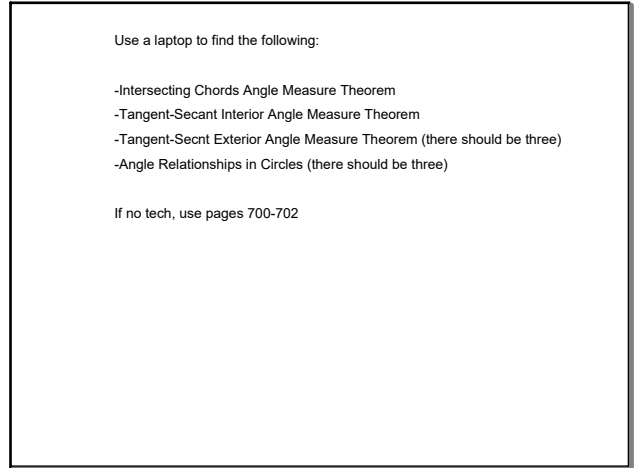
160°
- Find $m\widehat{KZ}$

62°

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October 19, 2018, Friday



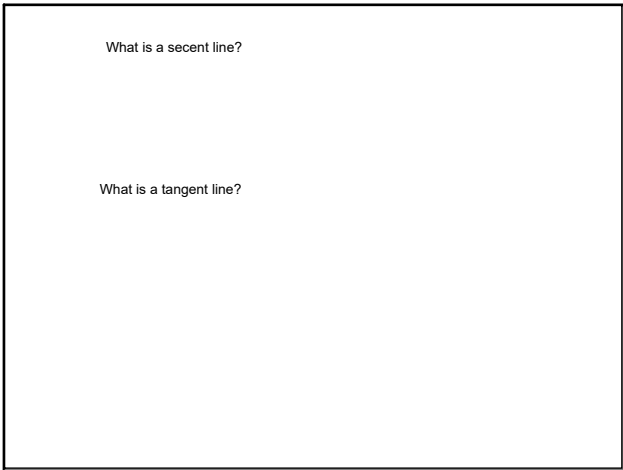
Use a laptop to find the following:

- 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

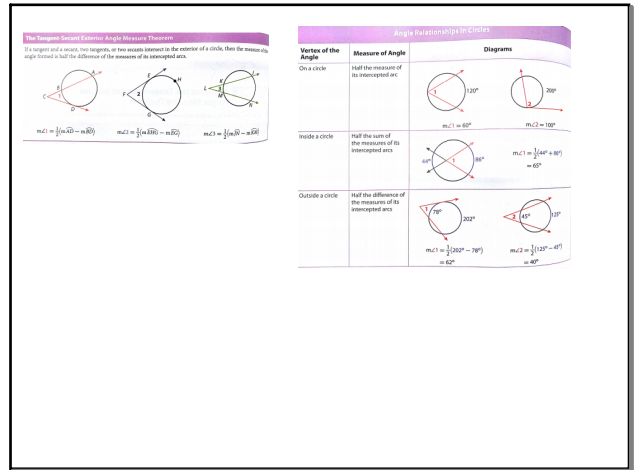
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Oct 11-3:27 PM



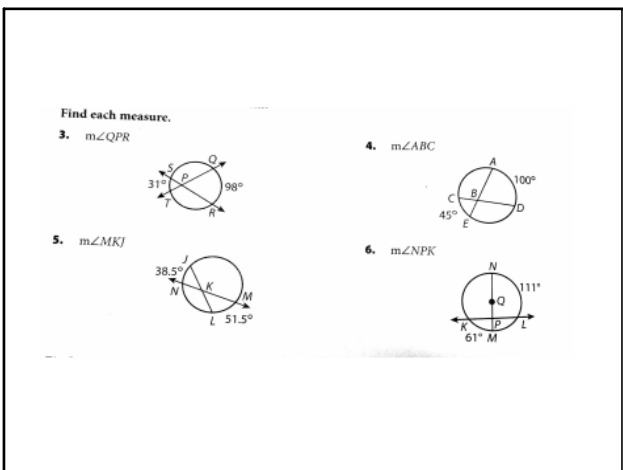
What is a secant line?

What is a tangent line?

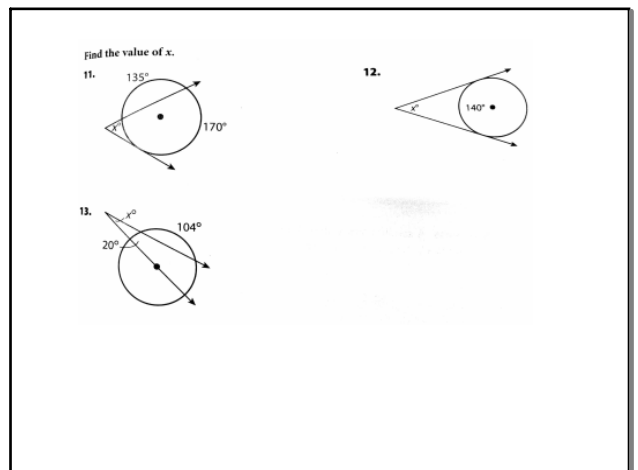


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





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



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Circles, Secant & Tangents
 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)  12) 



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Circles, Secant & Tangents
 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)  12) 

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