

October 29, 2018, Monday

20. Find angles 1 and 2.

360
 -105
 -130
 -70
 $\hline 55$

$41 = 55$, $42 = 37.5$
 $\angle 2 = \frac{1}{2}(130 - 55)$

If $m\angle ABC = 63^\circ$, find all three arc measures.

21. $\widehat{AB} = 180$, 22. $\widehat{BC} = 54$, 23. $\widehat{AC} = 126$

360
 -54
 -180

180
 -90
 -63
 $\hline 27$

diameter/line = 180°

$1+2+3 = 180$

Oct 26-8:13 AM

Discuss - draw

What are the 5 circle - angle arc formulas you know?

- 1
- 2
- 3
- 4
- 5

Oct 26-8:41 AM

What is a chord? A line that touches the circumference of a circle two times

Draw a circle with two intersecting chords

CHORDS: AD, BC

What is a secant segment? A line that passes through the circumference of a circle two times.

Draw a circle with 2 secant segments which intersect outside the circle.

SECANTS: FG, EH

What is a tangent segment? A line that touches the circumference of a circle ONE TIME.

Draw a circle with a secant segment and a tangent segment which intersect outside the circle.

SECANT: JK
TANGENT: LM

Oct 26-2:56 PM

Geometry - Circles & chords, secants, tangents

Chord-Chord Product Theorem

If two chords intersect inside a circle, then the products of the lengths of the segments of the chords are equal.

$AE \cdot EB = CE \cdot ED$

Secant-Secant Product Theorem

If two secants intersect in the exterior of a circle, then the product of the lengths of one secant segment and its external segment equals the product of the lengths of the other secant segment and its external segment.

$AE \cdot BE = CE \cdot DE$

Secant-Tangent Product Theorem

If a secant and a tangent intersect in the exterior of a circle, then the product of the lengths of the secant segment and its external segment equals the length of the tangent segment squared.

$AC \cdot BC = DC^2$

Oct 26-8:38 AM

Geometry ID: 1

Circles, Chords & Tangents

Solve for x. Assume the tangent.

- 1) $x \cdot 14 = 18 \cdot 21$
 $14x = 378$
 $x = 27$
- 2) $9 \cdot x = 6 \cdot 6$
 $9x = 36$
 $x = 4$
- 3) $(x+9) \cdot 9 = (17+10) \cdot 10$
 $9x + 81 = 270$
 $9x = 189$
 $x = 21$
- 4) $(x+8) \cdot 8 = (7+9) \cdot 9$
 $8x + 64 = 144$
 $8x = 80$
 $x = 10$
- 5) $x \cdot 15 = 10 \cdot 10$
 $15x = 100$
 $x = 6.67$
- 6) $x \cdot 10 = 15 \cdot 15$
 $10x = 225$
 $x = 22.5$
- 7) $x \cdot 18 = 12 \cdot 12$
 $18x = 144$
 $x = 8$
- 8) $x \cdot 12 = 15 \cdot 15$
 $12x = 225$
 $x = 18.75$
- 9) $x \cdot 15 = 10 \cdot 10$
 $15x = 100$
 $x = 6.67$
- 10) $x \cdot 10 = 15 \cdot 15$
 $10x = 225$
 $x = 22.5$
- 11) $x \cdot 18 = 12 \cdot 12$
 $18x = 144$
 $x = 8$
- 12) $x \cdot 12 = 15 \cdot 15$
 $12x = 225$
 $x = 18.75$
- 13) $x \cdot 15 = 10 \cdot 10$
 $15x = 100$
 $x = 6.67$
- 14) $x \cdot 10 = 15 \cdot 15$
 $10x = 225$
 $x = 22.5$

Oct 26-8:38 AM

9) $(x+9) \cdot 9 = 15^2$
 $9x + 81 = 225$
 $-81 -81$
 $9x = 144$
 $x = 16$

10) $(x+15) \cdot 18 = 30^2$
 $18x + 324 = 900$
 $-324 -324$
 $18x = 576$
 $\frac{18x}{18} = \frac{576}{18} x = 32$

$AC \cdot BC = DC^2$

Oct 29-1:38 PM

Geometry _____ Name _____ ID: 1
 Circles, Chords & Secants _____ Date _____ Period _____

Solve for x . Assume that lines which appear tangent are tangent.

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Oct 26-11:09 AM

On a new sheet of paper (you can 1/2 with someone).

Write 3 circle problems, using your new chord, tangent, secant rules.

Turn these in!!

Oct 29-1:43 PM

October 30, 2018, Tuesday

From your notes - write one of the 'new' circle rules we covered yesterday (circles with chords, secants, and tangents).

Oct 26-8:23 AM

<https://www.mathwarehouse.com/geometry/circle/tangent-secant-side-length.php>

Math Warehouse

Math Gifts Algebra Geometry Trigonometry Calculus Teacher Tools

Side Length of Tangent & Secant of a Circle
 Tangents, secants, Side Lengths Theorems & Formula

Review the three rules, then try each problem BEFORE you look at the answer!

Oct 26-11:10 AM

October 31, 2018, Wednesday

Oct 26-8:23 AM

Geometry _____ Name _____ ID: 1
 Find the correct Circle Chord & Secant Rule _____ Date _____ Period _____



Solve for x . Assume that lines which appear tangent are tangent.



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

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

Geometry _____ Name _____ ID: 1
 Find the correct Circle Chord & Secant Rule Date _____ Period _____



Solve for x . Assume that lines which appear tangent are tangent.

1)  2) 

3)  4) 

5)  6) 

7)  8) 

9)  10) 

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Oct 26-11:08 AM

November 1 2018, Thursday


Oct 26-8:23 AM

What is circumference?
 Draw a pic of circumference.
 Find C if $r = 2$.
 What is $1/2$ of the circumference? $1/4$? $3/4$?
 How many degrees are $1/2$, $1/4$, $3/4$, & 1 around a circle?
 Look at p730 (copy) what is m ?
 What is area?
 What if I want a piece of area?
 Look at p 738 (copy). What is m ?

Oct 26-2:57 PM

Arc Length


The arc length, s , of an arc with measure m° and radius r is given by the formula $s = \frac{m}{360} \cdot 2\pi r$.




Oct 26-2:54 PM

Geometry _____ Name _____ ID: 1
 Circle circumference to arc length Date _____ Period _____



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 26-11:15 AM

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 26-11:16 AM


Geometry _____ Name _____ ID: 1
 Circle circumference to arc length Date _____ Period _____
 Find the diameter of each circle. Round your answer to the nearest tenth.


1)  6 km

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

2)  12 yd


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


3)  18.8 km


4)  38.3 m


Oct 26-11:16 AM


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


5)  31.4 ft


6)  46.1 km


7)  5.5 km

8)  62.3 cm

9)  93.5 km


10)  7.3 m


11)  34.8 cm


12)  5.2 cm


Oct 26-11:16 AM


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.


1)  75.4 mi


2)  25.1 cm


3)  14.5 km

4)  59.1 m

5)  68.5 cm


6)  56.5 m


7)  50.3 m


8)  37.7 km


Oct 26-11:22 AM


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.


1)  75.4 mi


2)  25.1 cm


3)  14.5 km

4)  59.1 m

5)  68.5 cm

6)  56.5 m

7)  50.3 m

8)  37.7 km

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
Area of a Sector


The area A of a sector with a central angle of m° of a circle with radius r is given by


$$A = \frac{m}{360} \cdot \pi r^2$$


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
Geometry _____ Name _____ ID: 1
 The sector...a piece of a circle Date _____ Period _____
 Find the area of each sector. Round your answers to the nearest tenth.


1)  113.1


2)  37.7


3)  117.8


4)  37.7


5)  26.7

6)  40.8

7)  57.5











8)  15.1

9)  22.6

10)  37.7

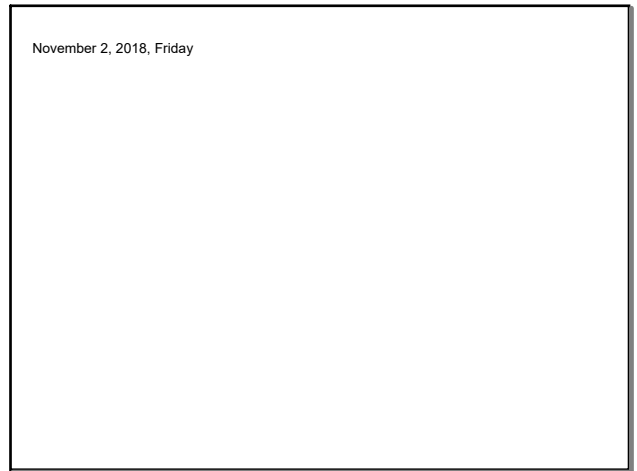
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Geometry _____ Name _____ ID: 1
The sector...a piece of a circle _____ Date _____ Period _____
Find the area of each sector. Round your answers to the nearest tenth.

1)  265.1 m ²	2)  44.2 m ²
3)  117.8 cm ²	4)  282.7 cm ²
5)  150.8 m ²	6)  221.7 yd ²
7)  205.3 yd ²	8)  14.1 cm ²
9)  28.3 ft ²	10)  196.3 m ²

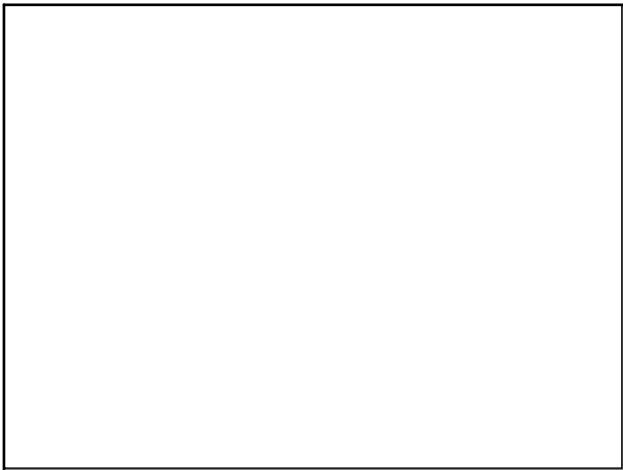
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November 2, 2018, Friday

Oct 26-8:23 AM



Oct 26-12:23 PM