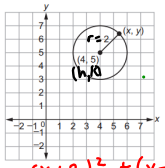
March 11, 2019, Monday

EOC Released Problems...

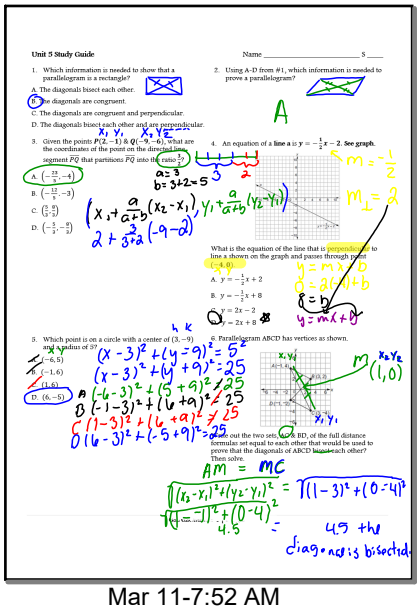
1) What is the equation of the circle with a center at (4, 5) and a radius of 2?



2) Which is an equation for the circle with center at (−2, 3) and a radius of 3?

A. $x^2 + y^2 + 4x - 6y + 22 = 0$
B. $2x^2 + 2y^2 + 3x - 3y + 4 = 0$
C. $x^2 + y^2 + 4x - 6y + 4 = 0$
D. $3x^2 + 3y^2 + 4x - 6y + 4 = 0$

Mar 5-2:56 PM



Unit 5 Study Guide

Name _____ S ____

1. Which information is needed to show that a parallelogram is a rectangle?
A. The diagonals bisect each other.
B. The diagonals are congruent.
C. The diagonals are congruent and perpendicular.
D. The diagonals bisect each other and are perpendicular.

2. Using A-D from #1, which information is needed to prove a parallelogram?

3. Given the points $P(2, -1)$ & $Q(-9, -6)$, what are the coordinates of the point on the directed line segment $\overline{PQ}$ that partitions $\overline{PQ}$ into the ratio 2:3?
A. $\left(-\frac{12}{5}, -4\right)$
B. $\left(-\frac{12}{5}, -3\right)$
C. $\left(\frac{8}{5}, \frac{9}{5}\right)$
D. $\left(-\frac{8}{5}, -\frac{9}{5}\right)$

4. An equation of a line a is $y = -\frac{1}{2}x - 2$. See graph.

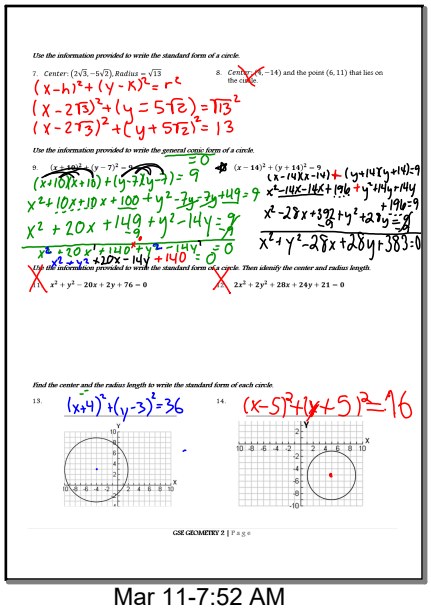
What is the equation of the line that is perpendicular to line a shown on the graph and passes through point (−4, 0)?
A. $y = -\frac{1}{2}x + 2$
B. $y = -\frac{1}{2}x + 8$
C. $y = 2x - 2$
D. $y = 2x + 8$

5. Which point is on a circle with a center of (3, −9) and a radius of 5?
A. (−6, 5)
B. (−1, 6)
C. (1, 6)
D. (6, −5)

6. Parallelogram ABCD has vertices as shown.

Point out the two sets of BD, of the full distance formulas set equal to each other that would be used to prove that the diagonals of ABCD bisect each other? Then solve.

Mar 11-7:52 AM



Use the information provided to write the standard form of a circle.

7. Center: $(2\sqrt{3}, -5\sqrt{2})$, Radius = $\sqrt{13}$

8. Center (4, −4) and the point (6, 11) that lies on the circle.

Use the information provided to write the general conic form of a circle.

9.

Use the information provided to write the standard form of a circle. Then identify the center and radius length.

$x^2 + y^2 - 20x + 2y + 76 = 0$

$2x^2 + 2y^2 + 28x + 24y + 21 = 0$

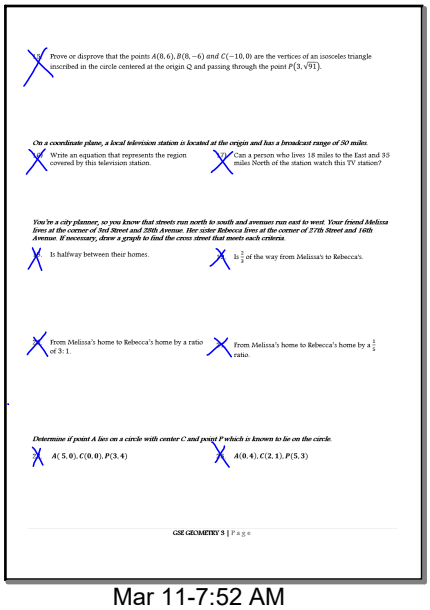
Find the center and the radius length to write the standard form of each circle.

13.

14.

GSE GEOMETRY 2 | Page

Mar 11-7:52 AM



10. Prove or disprove that the points $A(0, 6), B(8, -6)$ and $C(-10, 0)$ are the vertices of an isosceles triangle inscribed in the circle centered at the origin Q and passing through the point $P(3, \sqrt{91})$.

On a coordinate plane, a local television station is located at the origin and has a broadcast range of 50 miles.

11. Write an equation that represents the region covered by this television station.

12. Can a person who lives 18 miles to the East and 35 miles North of the station watch this TV station?

You're a city planner, so you know that streets run north to south and avenues run east to west. Your friend Melissa lives at the corner of 3rd Street and 20th Avenue. Her sister Rebecca lives at the corner of 27th Street and 16th Avenue. If necessary, draw a graph to find the cross street that meets each criteria.

13. Is halfway between their homes.

14. Is $\frac{2}{3}$ of the way from Melissa's to Rebecca's.

15. From Melissa's home to Rebecca's home by a ratio of 3: 1.

16. From Melissa's home to Rebecca's home by a $\frac{1}{2}$ ratio.

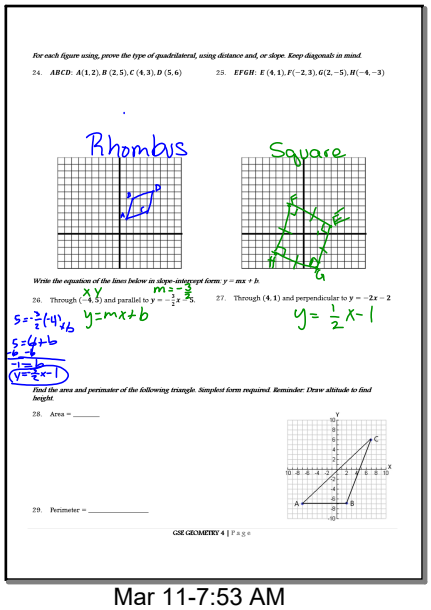
Determine if point A lies on a circle with center C and point P which is known to lie on the circle.

17. $A(5, 0), C(0, 0), P(3, 4)$

18. $A(0, 4), C(2, 1), P(5, 3)$

GSE GEOMETRY 3 | Page

Mar 11-7:52 AM



For each figure using, prove the type of quadrilateral, using distance and, or slope. Keep diagonals in mind.

24. ABCD: $A(1, 2), B(2, 5), C(4, 3), D(5, 6)$

25. EFGH: $E(4, 1), F(-2, 3), G(2, -5), H(-4, -3)$

Rhombus

Square

Write the equation of the lines below in slope-intercept form: $y = mx + b$.

26. Through $(-4, 5)$ and parallel to $y = -\frac{1}{2}x - 2$.

27. Through $(4, 1)$ and perpendicular to $y = -2x - 2$

Find the area and perimeter of the following triangle. Simplest form required. Reminder: Draw altitude to find height

28. Area = _____

29. Perimeter = _____

GSE GEOMETRY 4 | Page

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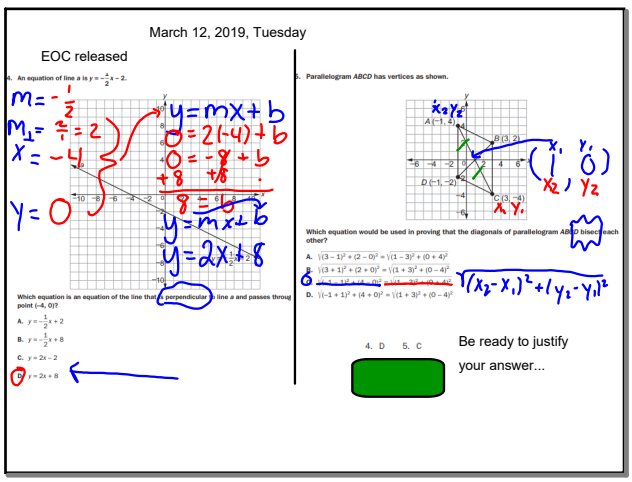


March 12, 2019, Tuesday

EOC released

4. An equation of line a is $y = -\frac{1}{2}x - 2$.

Which equation is an equation of the line that is perpendicular to line a and passes through point (−4, 0)?
A. $y = -\frac{1}{2}x + 2$
B. $y = -\frac{1}{2}x + 8$
C. $y = 2x - 2$
D. $y = 2x + 8$

5. Parallelogram ABCD has vertices as shown.

Which equation would be used in proving that the diagonals of parallelogram ABCD bisect each other?
A. $\sqrt{(3-1)^2 + (2-0)^2} = \sqrt{(1-3)^2 + (0+4)^2}$
B. $\sqrt{(3+1)^2 + (2+0)^2} = \sqrt{(1+3)^2 + (0-4)^2}$
C. $\sqrt{(-1+1)^2 + (4+0)^2} = \sqrt{(1+3)^2 + (0-4)^2}$
D. $\sqrt{(-1+1)^2 + (4+0)^2} = \sqrt{(1+3)^2 + (0-4)^2}$

4. D 5. C

Be ready to justify your answer...

Mar 5-2:42 PM

Unit 5 Test

page 1 pick 4

page 2 pick 4

page 3 pick 2

Mar 12-11:17 AM

https://www.youtube.com/watch?v=5tp74g4N8EY

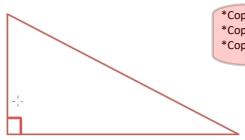
Weebly Website Bui... Calendar - llcole@p... Paulding County Lo... Home Remind

YouTube Search

Trigonometric ratios

SOH CAH TOA

*Copy the meaning of SOHCAHTOA
*Copy 2 examples and
*Copy the last/flag pole example (last)



https://www.youtube.com/watch?v=5tp74g4N8EY

Mar 5-2:32 PM

EOC Released.... March 6, 2019, Wednesday

1. In right triangle ABC, angle A and angle B are complementary angles. The value of cos A is $\frac{5}{13}$. What is the value of sin B?

A. $\frac{5}{13}$
B. $\frac{12}{13}$
C. $\frac{13}{12}$
D. $\frac{13}{5}$

2. Triangle ABC is given below.

What is the value of cos A?

A. $\frac{3}{5}$
B. $\frac{3}{4}$
C. $\frac{4}{5}$
D. $\frac{5}{3}$

Be ready to justify your answer....

Mar 5-2:45 PM

March 6, 2019, Wednesday

Congruent = equal

3. What information is needed to show that a parallelogram is a square?

Diagonals are congruent

4. Parallel lines have Same slope and perpendicular lines have negative reciprocal slopes.

5. Find the midpoint of the line segment containing A(5,-8) and B(-7,-4)

$\left(\frac{x_1+x_2}{2}\right)$ or $\left(\frac{y_1+y_2}{2}\right)$

$\left(\frac{5-7}{2}\right)=-1$ $\left(\frac{-8-4}{2}\right)=-4$

(-1,-4)

6. If a line segment needs to be portioned by a 3:4 ratio, what is the fraction that would be used to find the point? $\frac{3}{3+4}=\frac{3}{7}$

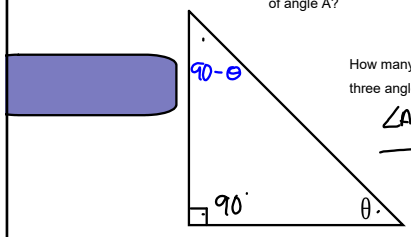
3:4

$(x,y)=\left(x_1+\frac{a}{a+b}(x_2-x_1), y_1+\frac{a}{a+b}(y_2-y_1)\right)$

Mar 13-7:44 AM

Using the information given, what is the measure of angle A?

<A



How many degree do three angles in a triangle =? 180°

$\angle A + 90° + \theta = 180°$

$-90° \quad -90°$

$\angle A + \theta = 90$

$-\theta \quad -\theta$

$\angle A = 90 - \theta$

(You can not get a #, since there are no #s, but you can get an equation?)

θ = theta

Mar 12-1:36 PM

From yesterday....what is sohcahtoa?

SoHcahToa - Sine Cosine Tangent

Sin Cos tan

θ = Theta

$S\frac{O}{H}$ = Opposite / Hypotenuse

$C\frac{A}{H}$ = Adjacent / Hypotenuse

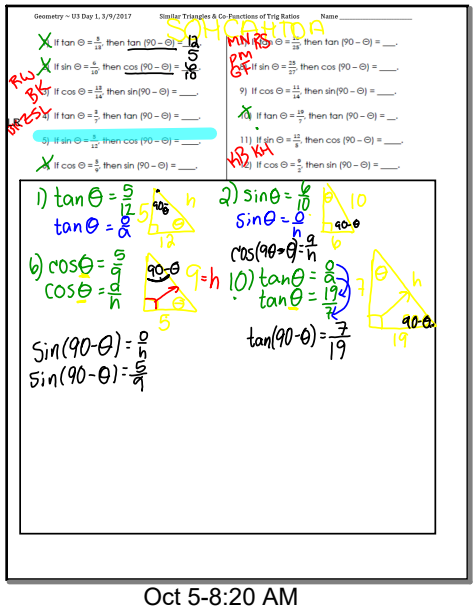
$T\frac{O}{A}$ = Opposite / Adjacent

SOH stands for sine equals opposite over Hypotenuse

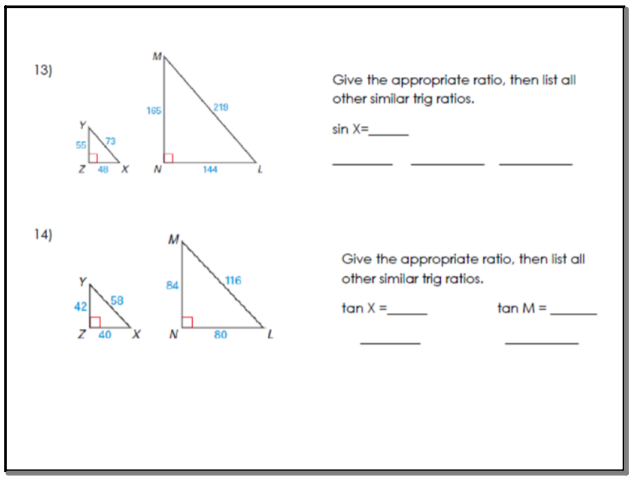
CAH stands for cosine equal Adjacent over Hypotenuse

TOA stands for Tangent equals opposite over Adjacent

Mar 13-7:50 AM



Oct 5-8:20 AM



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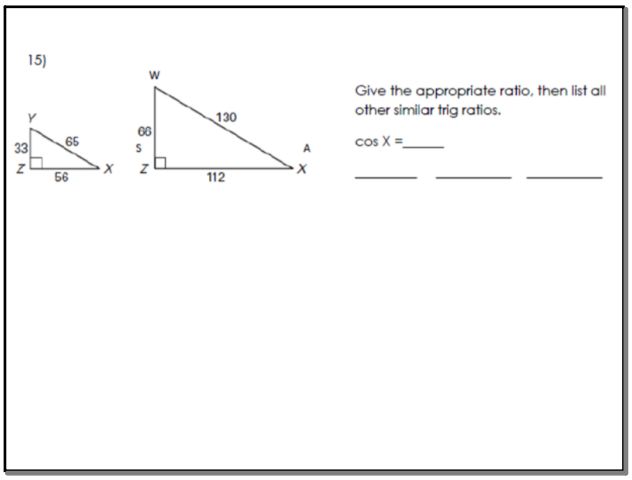

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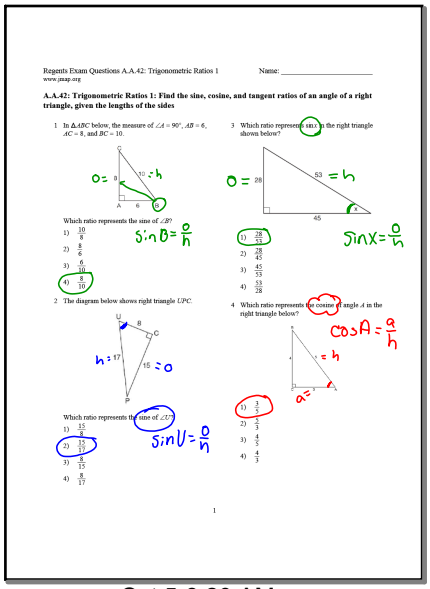

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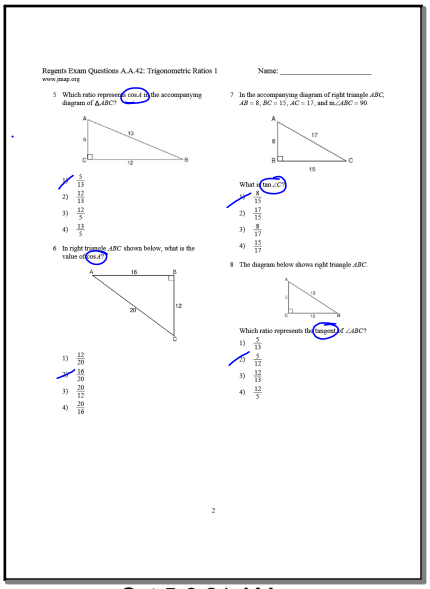

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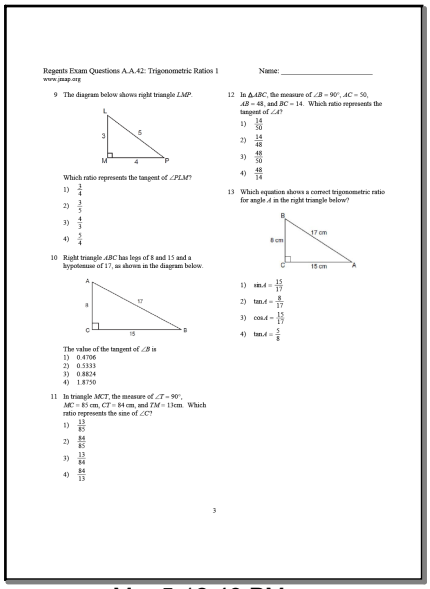


Mar 5-12:48 PM

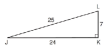
Regents Exam Questions A.A.42: Trigonometric Ratios 1 Name: _____
www.jmap.org

14 In right triangle ABC shown below, $AC = 12$, $BC = 16$, and $AB = 20$.

Which equation is *not* correct?

1) $\cos A = \frac{12}{20}$
2) $\tan A = \frac{16}{12}$
3) $\sin B = \frac{12}{20}$
4) $\tan B = \frac{16}{20}$

15 In right triangle JKL in the diagram below, $KL = 7$, $JK = 24$, $JL = 25$, and $\angle K = 90°$.



Which statement is *not* true?

1) $\tan L = \frac{24}{7}$
2) $\cos L = \frac{24}{25}$
3) $\tan J = \frac{7}{24}$
4) $\sin J = \frac{7}{25}$

16 In $\triangle ABC$, $m\angle C = 90°$. If $AB = 5$ and $AC = 4$, which statement is *not* true?

1) $\cos A = \frac{4}{5}$
2) $\tan A = \frac{3}{4}$
3) $\sin B = \frac{4}{5}$
4) $\tan B = \frac{3}{5}$

4

Mar 5-2:41 PM

Geometry – U3 Day 1, 3/9/2017 Name_____

Trig Ratios HW

Find the value of each trigonometric ratio.

1) sin C

2) sin Z

3) cos Z

4) sin A

5) sin C

6) tan A

7) sin A

8) cos X

9) cos C

10) tan A

11) sin C

12) sin X

13) cos Z

14) tan A

Mar 5-2:42 PM

Geometry – U3 Day 2, 3/10/2017 Name_____

TOTD Find Missing Sides & Trig Complements

Find the missing side. Round to the nearest tenth.

1)

2)

3)

4)

5)

6)

7) If $\sin\theta = \frac{4}{5}$, then $\cos(90-\theta) =$ _____

8) If $\tan\theta = \frac{4}{5}$, then $\tan(90-\theta) =$ _____

9) If $\tan\theta = \frac{7}{15}$, then $\tan(90-\theta) =$ _____

10) If $\tan\theta = \frac{21}{20}$, then $\cos(90-\theta) =$ _____

HINT Draw a picture & solve using Pythagorean Theorem.

Mar 5-2:42 PM

Geometry – U3 Day 2, 3/10/2017 Name_____

Using Trig to Find Missing Sides HW

Find the missing side. Round to the nearest tenth.

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

11)

12)

Mar 5-2:44 PM

Geometry – U3 Day 3, 3/13/2017 Name_____

Using Trig to Find Missing Angles

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

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

11)

12)

13)

14)

15)

16)

Mar 5-2:45 PM

Geometry – U3 Day 3, 3/13/2017 Name_____

TOTD Using Trig to Find Missing Angles

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

1)

2)

3)

4)

5)

6)

Mar 5-2:47 PM

Geometry ~ Day 3, 3/13/2017 Name _____

Unit 3 Quiz 1 ~ Review

Find the value of each trigonometric ratio.

1) tan Z

2) If $\cos\theta = \frac{4}{7}$, the $\sin(90-\theta) =$ _____

3) If $\tan\theta = \frac{17}{13}$, the $\tan(90-\theta) =$ _____

4) If $\tan\theta = \frac{45}{28}$, the $\sin\theta =$ _____

Find the missing side. Round to the nearest tenth.

5)

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

6)

Mar 5-2:48 PM

March 14, 2019, Thursday

1. **Consider the construction of the angle bisector shown.**

Which could have been the first step in creating this construction?

A. Place the compass point on point A and draw an arc inside $\angle Y$.
B. Place the compass point on point B and draw an arc inside $\angle Y$.
C. Place the compass point on vertex Y and draw an arc that intersects $\overline{YX}$ and $\overline{YZ}$.
D. Place the compass point on vertex Y and draw an arc that intersects point C.

2. **Consider the beginning of the construction of a square inscribed in circle Q.**

Step 1: Label point R on circle Q.
Step 2: Draw a diameter through R and Q.
Step 3: Label the point where the diameter intersects the circle as point T.

What is the next step in this construction?

A. Draw radius $\overline{SQ}$.
B. Label point S on circle Q.
C. Construct a line segment parallel to $\overline{RT}$.
D. Construct the perpendicular bisector of $\overline{RT}$.

Be ready to justify your answers...

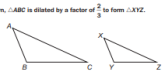
...quiz

Mar 5-2:50 PM

March 15, 2019, Friday

EOC Released....

1. **In the triangles shown, $\triangle ABC$ is dilated by a factor of $\frac{2}{3}$ to form $\triangle XYZ$.**



Given that $m\angle A = 50°$ and $m\angle B = 100°$, what is $m\angle Z$?

A. 15°
B. 25°
C. 30°
D. 50°

2. **In the triangle shown, $\overline{GH} \parallel \overline{DF}$.**

What is the length of $\overline{GE}$?

A. 2.0
B. 4.5
C. 7.5
D. 8.0

Be ready to justify your answers....

Mar 5-2:51 PM

Applications of Right Triangle Trig

Steps:

1) Draw a picture & determine what you are looking for.

2) Decide which Trig Ratio you will need to solve it.

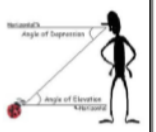
Solving Side Length? Use:

$\sin\theta = {}^{o}/_{h}$ $\cos\theta = {}^{a}/_{h}$ $\tan\theta = {}^{o}/_{a}$

Solving Angle Measure? Use:

$\theta = \sin^{-1}({}^{o}/_{h})\ \theta = \cos^{-1}({}^{a}/_{h})\ \theta = \tan^{-1}({}^{o}/_{a})$

3) Solve it.



Mar 5-2:51 PM

Day 5 Applications Right Triangle Trig.notebook March 15, 2017

5) A tree casts a shadow 70 feet long at an angle of elevation of 30°. How tall is the tree?

6) You are looking up at a fourth story window, 40 feet up in a building. You are 100 feet away from the building, across the street. What is the angle of elevation?

Oct 10-8:28 AM

7) John wants to measure the height of a tree. He walks exactly 100 feet from the base of the tree and looks up. The angle from the ground to the top of the tree is 33°. How tall is the tree?

8) A building is 50 feet high. At a distance away from the building, an observer notices that the angle of elevation to the top of the building is 47°. How far is the observer from the base of the building?

Oct 10-8:28 AM

Mar 5-2:52 PM

Day 5 Applications Right Triangle Trig.notebook March 15, 2017

9) A bird sits on top of a lamppost. The angle of depression from the bird to the feet of an observer standing away from the lamppost is . The distance from the bird to the observer is 25 meters. How tall is the lamppost?

10) An airplane is flying at a height of 2 miles above the ground. The distance along the ground from the airplane to the airport is 5 miles. What is the angle of depression from the airplane to the airport?

Oct 10-8:28 AM

Mar 5-2:53 PM

Geometry ~ U3 Day 6, 3/15/2017 Applications of Trig Ratios HW Name _____

Directions: Solve the following application problems, draw a picture for each problem. Show the trigonometric ratios used and solve showing ALL work. Round all measures of segments to the nearest hundredth and round all angle measures to the nearest degree.

1) A tree casts a shadow 21m long. The angle of elevation of the sun is 51°. What is the height of the tree?

2) You are flying a kite and have let out 80m of string. The kite's angle of elevation with the ground is 40°. If the string is stretched straight, how high is the kite above the ground?

3) A 15m pole is leaning against a wall. The foot of the pole is 10m from the base of the wall. Find the angle that the pole makes with the ground.

4) A guy wire reaches from the top of a 120m television transmitter tower to the ground. The wire makes a 63° angle with the ground. Find the length of the guy wire.

5) An airplane climbs at an angle of 18° with the ground. Find the ground distance the plane travels as it moves 2,500m through the air.

6) A lighthouse operator at point P 25m above sea level sights a sailboat at point S. The angle of depression of the sighting is 10°. How far is the boat from the base of the lighthouse?

7) Two trees stand opposite one another, at points A and B, on opposite banks of a river. Distance AC along one bank is perpendicular to AB, and is measured to be 100 feet. Angle ACB is measured to be 79°. How far apart are the two trees?

Mar 5-2:54 PM

8) Find the measure of height, h, of a flagpole when the shadow is 100 feet from its base (point P). The angle of elevation from point P to the top of the flagpole is 37° as shown in the diagram below.

9) A lighthouse is 62 feet tall. If the angle of depression the light house keeper has to the boat is 36°, how far away is the boat from the light house?

10) Triangle ABC and triangle MNL are similar triangles. If $BC = 10$, $ML = 30$, and $\sin M = 2/5$, what is the length of AC? What is the measure of angle M?

11) A ladder makes a 21° angle with the ground. How long is the ladder if it reaches 19 feet up the wall?

12) A 12 foot ladder is leaning against the wall of a building. If the ladder makes a 38° angle with the wall, how far is the base of the ladder from the wall?

13) A plane took off from the runway. When the plane had flown 4km, it had covered a horizontal distance of 3.6km. Find the angle of elevation at which the plane rose from the ground.

14) Jane is standing 40 feet from the base of an oak tree. She measures the angle of elevation of the line of sight from a point on the ground to the top of the tree to be 62°. How tall is the tree?

Mar 5-2:54 PM