SAS October 1, 2018, Monday

1) 5 45 7 5 45 7 AA

2) 30 30 30 30

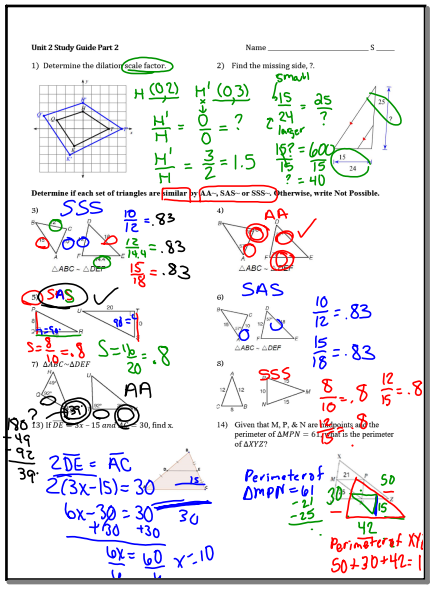
3) midsegments

Vocabulary Check!

1) Draw two triangles which are congruent (with leg lengths &/or angles) → 3 ways
2) Draw two triangles which are similar (with leg lengths &/or angles) → 3 ways
3) Draw a midsegment of a triangle (using tic marks where appropriate)
4) What two geometric tools can you use to make geometric constructions?

Compass
protractor

Sep 20-8:31 AM



Unit 2 Study Guide Part 2 Name _____ S ____

1) Determine the dilation scale factor. H (0,2) H' (0,3) H'/H = 0/0 = ? H'/H = 3/2 = 1.5

2) Find the missing side, ?. small 15/24 = 25/? larger 15? = 600/15 ? = 40

Determine if each set of triangles are similar by AA~, SAS~ or SSS~, otherwise, write Not Possible.

3) SSS 10/12 = .83 12/14.4 = .83 15/18 = .83 △ABC ~ △DEF

4) AA △ABC ~ △DEF

5) SAS 8/10 = .8 S = 12/20 = .8

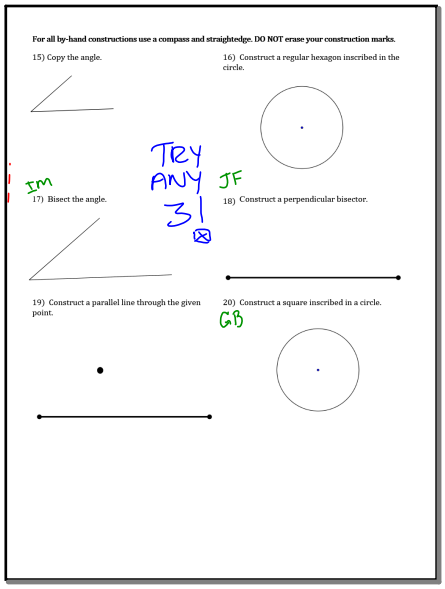
6) SAS 10/12 = .83 15/18 = .83 △ABC ~ △DEF

7) △ABC ~ △DEF

8) SSS 8/10 = .8 12/15 = .8

13) If DE = 3x − 15 and AC = 30, find x. 2DE = AC 2(3x−15) = 30 6x−30 = 30 +30 +30 6x = 60 x = 10

14) Given that M, P, & N are collinear, and the perimeter of ΔMPN = 61 and is the perimeter of ΔXYZ? Perimeter of ΔMPN = 61 −21 −25 15 Perimeter of XYZ 50+30+42=122



For all by-hand constructions use a compass and straightedge. DO NOT erase your construction marks.

15) Copy the angle.

16) Construct a regular hexagon inscribed in the circle.

TRY ANY 31 ⊗

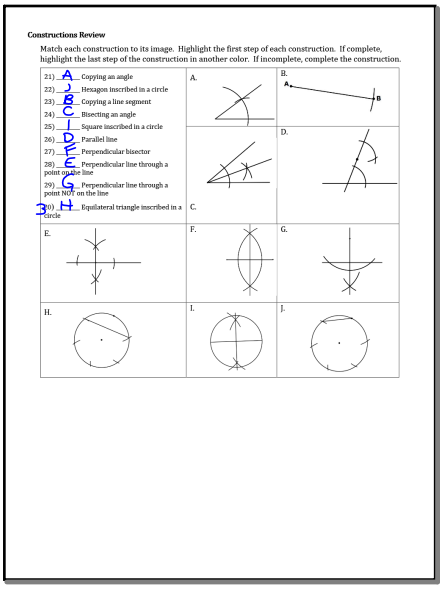
IM JF

17) Bisect the angle.

18) Construct a perpendicular bisector.

19) Construct a parallel line through the given point.

20) Construct a square inscribed in a circle. GB

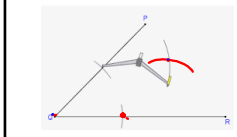


Constructions Review

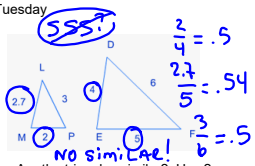
Match each construction to its image. Highlight the first step of each construction. If complete, highlight the last step of the construction in another color. If incomplete, complete the construction.

21) A Copying an angle
22) J Hexagon inscribed in a circle
23) B Copying a line segment
24) C Bisecting an angle
25) I Square inscribed in a circle
26) D Parallel line
27) F Perpendicular bisector
28) E Perpendicular line through a point on the line
29) G Perpendicular line through a point NOT on the line
30) H Equilateral triangle inscribed in a circle

A. B. C. D. E. F. G. H. I. J.



October 2, 2018, Tuesday

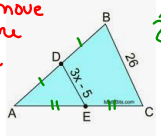


SSS? 2/4 = .5 2.7/5 = .54 3/6 = .5 NO similar!

Are the triangles similar? How?

What is being constructed? angle bisector

What is the next step? move compass to the point on QR



What is x? 2(3x−5) = 26 6x−10 = 26 +10 +10 6x = 36 x = 6

Test!

Sep 20-8:32 AM

Test

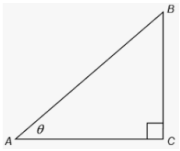
You may skip 1 problem per page, please write 'skip' on that problem otherwise I will grade it.

16. You may complete the construction described or a equilateral triangle inscribed in a circle. Please leave construction marks (= do not erase!).

Oct 2-7:58 AM

Using a laptop find out what SOHCAHTOA means. Write it in mathematical terms (letters & variables).

Label the following triangle using the words: hypotenuse, opposite & adjacent

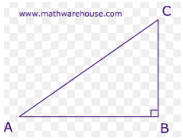


Oct 2-11:13 AM

October 3, 2018, Wednesday

Unit 3 - Right Triangle Trigonometry

State a minimum of 5 characteristics of the following triangle.

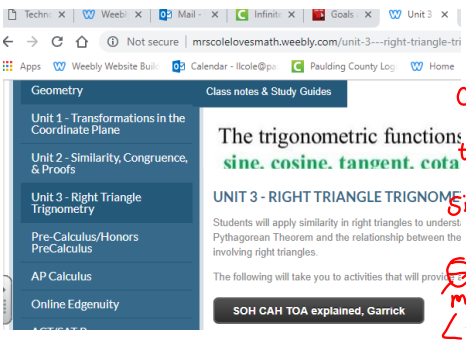


Sep 20-8:33 AM

Unit 3 - What is Right Triangle Trigonometry?

https://youtu.be/5UY8s9SpIQI by Garrick

While watching this video, list 5 important things you discover in your notebook.



"theta" angle measure

$\cos\theta = \frac{adj}{hyp}$

$\tan\theta = \frac{oppo}{adj}$

$\sin\theta = \frac{oppo}{hyp}$

θ can move, it's the ∠ you are looking for

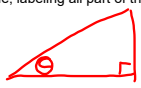
Sep 20-8:48 AM

p585

SOHCAHTOA $\tan\theta = \frac{o}{a}$

Draw the Ratio in a Right Triangle, labeling all part of the right triangle

copy the diagram



p590 Use the tangent to find the unknown side length. #9-14

9 N

$\tan\theta = \frac{oppo}{adj}$

10

Find AC

hypotuse

opposite

adjacent

27°

8.0

$\tan\theta = \frac{o}{a}$

$8(\tan 27) = \frac{(o)}{8}$

4.1 = o

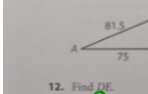
p 590 Use the tan-1 to find the unknown angle measure #15-17

inverse tangent $\tan^{-1}$ OR arctan

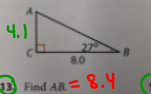
Sep 20-10:57 AM

Use the tangent to find the unknown side length.

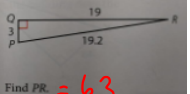
9. Find QR.



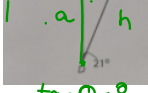
10. Find AC.



11. Find PQ.



12. Find DE.



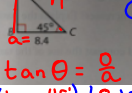
$\tan\theta = \frac{o}{a}$

$a\tan 21 = \frac{13}{a}\,a$

$\frac{a\tan 21}{\tan 21} = \frac{13}{\tan 21}$

$a = 33.9$

13 Find AB = 8.4

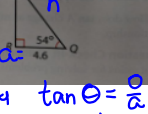


$\tan\theta = \frac{o}{a}$

$8.4(\tan 45) = \frac{(o)}{8.4}8.4$

$8.4 = 0$

14 Find PR = 6.3



$\tan\theta = \frac{o}{a}$

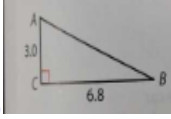
$4.6(\tan 54) = \frac{(o)}{4.6}4.6$

$6.3 = 0$

Oct 3-10:16 AM

Find the measure of the angle specified for each triangle. Use the inverse tangent ($\tan^{-1}$) function of your calculator. Round your answer to the nearest degree.

15. Find ∠A.



16. Find ∠R.

17. Find ∠B.

$\tan\theta = \frac{o}{a}$

$\frac{\tan\theta}{\tan} = \frac{9}{24}$

$\theta = \tan^{-1}\left(\frac{9}{24}\right)$

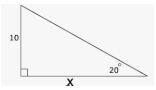
$\theta = 21$

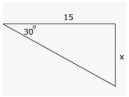
Oct 3-10:17 AM

Oct 4, 2018, Wednesday

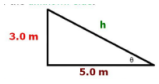
How do SOHCAHTOA help you remember the tangent ratio.

Set up the tangent ratio to solve for x.





Set up the tangent ratio to solve for theta.



Oct 3-11:42 AM

What does the tangent ratio help you find?

https://youtu.be/BLHk7WkqdKw by Owens

Tangent Ratio explained, Owens

kuta practice

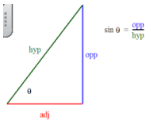
Sep 20-11:00 AM

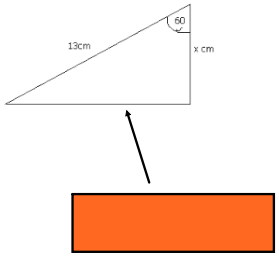
Copy p594 Trig Ratios

How does this fit in our SOHCAHTOA?

Sep 20-11:15 AM

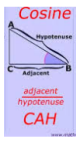
Let's start with sine (SOH)...

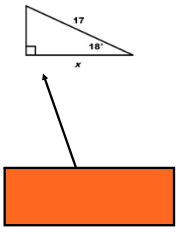




Sep 20-11:17 AM

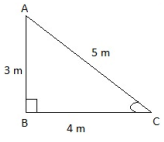
& now for cosine (CAH)...





Sep 20-11:19 AM

Can you use multiple ratios (SOH), (CAH), and/or (TOA)?



Sep 20-11:23 AM

Let's explore some resources about trigonometry ratios on Geogebra...

https://ggbm.at/Z3wcyhcB brzenzi geobra trig ratio

https://www.geogebra.org/m/sxu5ZSuX#material/UZDfrWDq ayoob trig ratio veiwing triangles

Write down 3 observations for each Geogebra file.

Sep 20-11:25 AM

Familiarizing with the Sine ratio - Kuta

Familiarizing with the Cosine ratio - Kuta

Can you choose the correct ratio? - Self assess

Word problems with a group.

Sep 20-11:56 AM

Oct 2-1:44 PM