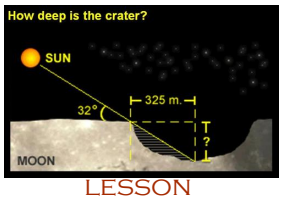
TRIGONOMETRY

TRIANGLE MEASURE

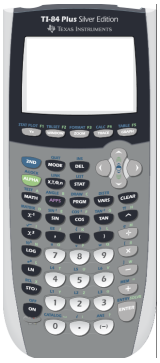


LESSON ALIGNMENT 8-4

Objective: Use trigonometric ratios to find angle measures in right triangles

Feb 1-1:31 PM

I have always wondered about those buttons...



sin = sine

cos = cosine

tan = tangent

Feb 24-11:42 AM

Before we can learn TRIGONOMETRY,we must learn the trigonometry calculations first!

step 1 check your settings! we must be in DEGREE mode

Feb 24-11:55 AM

step 2 familiarize yourselfwith the THREE trigonometric functions that we will be using in this class.

examples: 1. $\sin(53^\circ) =$ 4. $\sin(87^\circ) =$

2. $\cos(53^\circ) =$ 5. $\cos(22^\circ) =$

3. $\tan(53^\circ) =$ 6. $\tan(49^\circ) =$

Round to the nearest ten-thousandths!
That's 4 places after the decimal ;-)

Feb 24-12:07 PM

step 3 prepare yourself for solving trig equations...WHERE IN THE WORLD IS THE **VARIABLE**?

7. $COS(57)^\circ = \frac{x}{12.8}$ 8. $TAN(32)^\circ = \frac{10.9}{x}$ 9. $SIN(x)^\circ = \frac{15.3}{17.1}$

Feb 24-12:33 PM

Just remember this when you are solving a trig problem...

WHERE IS THE VARIABLE?

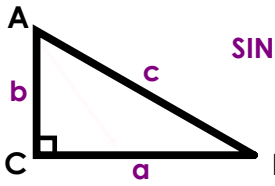
Up High Multiply!

Denominator Divide!

Inside Inverse!

Nov 13-7:55 PM

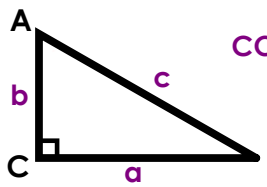
Important Trig Ratios



SIN A = $\frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$

Feb 26-8:15 AM

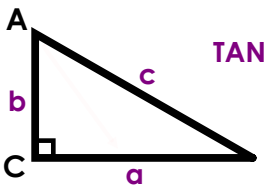
Important Trig Ratios



COS A = $\frac{\text{leg adjacent to } \angle A}{\text{hypotenuse}}$

Feb 26-8:15 AM

Important Trig Ratios



TAN A = $\frac{\text{leg opposite } \angle A}{\text{leg adjacent to } \angle A}$

Feb 26-8:15 AM

Trig Ratios Summarized

SIN $\angle = \frac{opposite}{hypotenuse} \Rightarrow S = \frac{o}{h}$

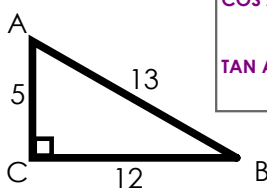
COS $\angle = \frac{adjacent}{hypotenuse} \Rightarrow C = \frac{a}{h}$

TAN $\angle = \frac{opposite}{adjacent} \Rightarrow T = \frac{o}{a}$

SOH CAH TOA

Feb 26-8:55 AM

1. complete each ratio:



SIN A =

COS A =

TAN A =

SIN B =

COS B =

TAN B =

SIN C =

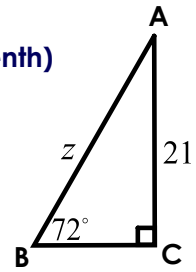
COS C =

TAN C =

Circle and Label!

Feb 26-8:15 AM

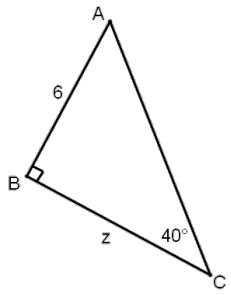
2. find the value of z. (round to the nearest tenth)



Circle and Label!

Feb 26-9:10 AM

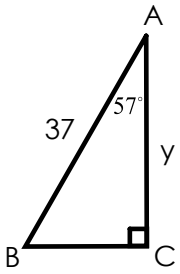
3. find the value of z.
(round to the nearest tenth)



Circle and Label!

Feb 26-9:10 AM

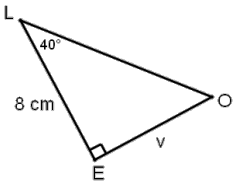
4. find the value of y.
(round to the nearest tenth)



Circle and Label!

Feb 26-9:10 AM

5. find the value of v.
(round to the nearest tenth)



Circle and Label!

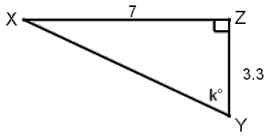
Feb 26-9:10 AM

6. find the m∠B.
(round to the nearest degree)

Circle and Label!

Feb 26-9:10 AM

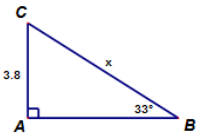
6. find the value of k.
(round to the nearest degree)



Circle and Label!

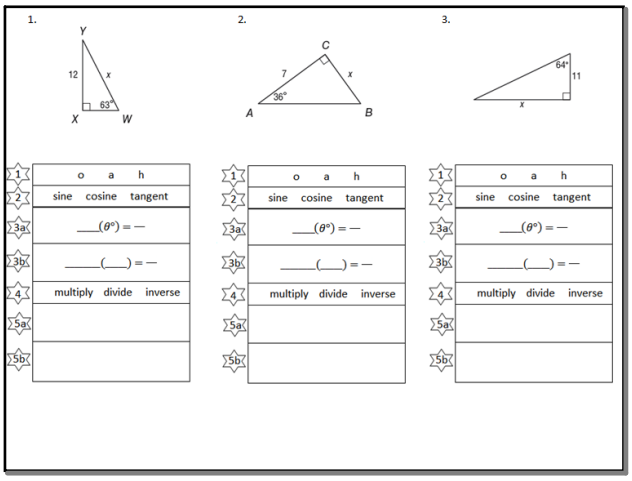
Feb 26-9:10 AM

Example for Practice Problems!

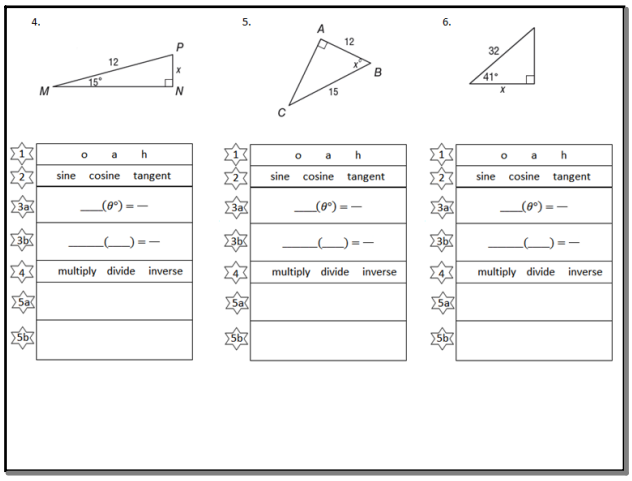


1	o a h
2	sine cosine tangent
3a	$\sin(\theta°) = \frac{o}{h}$
3b	$\sin(33°) = \frac{3.8}{x}$
4	multiply divide inverse
5a	$x = \frac{3.8}{\sin(33°)}$
5b	$x \approx 7.0$

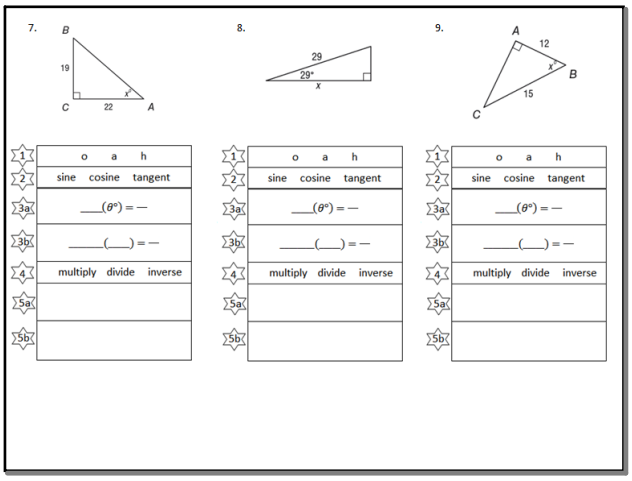
Nov 15-3:54 PM



May 1-8:00 AM



May 1-8:00 AM



May 1-8:00 AM