Date: _____

Today's Learning Goal(s):

By the end of the class, I will be able to:

a) evaluate the primary and reciprocal trigonometric ratios.

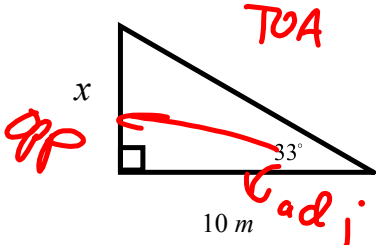
b) find unknowns sides and angles
using the primary and reciprocal trigonometric ratios.

Last day's work: p. 274 #1 - 8

5.1 Trigonometric Ratios of Acute Angles

Date: Apr. 24 / 17

Ex.1 Calculate x, to two decimal places.



TOA

opp

adj

$\tan 33^\circ = \frac{x}{10}$

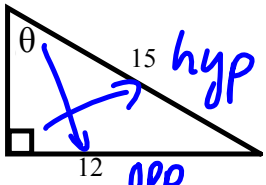
$10 \tan 33^\circ = x$

$x \doteq 6.494$

$\doteq 6.49 m$

6.494

Ex.2 Calculate θ, to one decimal place. θ = theta



hyp

opp

SOH

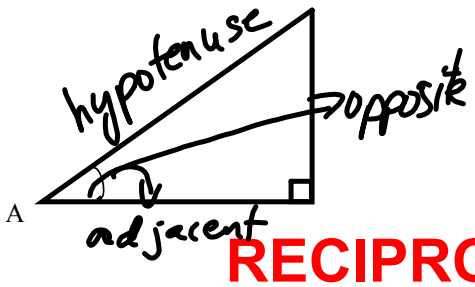
$\sin\theta = \frac{12}{15}$

$\theta = \sin^{-1}\left(\frac{12}{15}\right)$

$\doteq 53.13$

$\doteq 53.1^\circ$

53.13



SOH CAH TOA

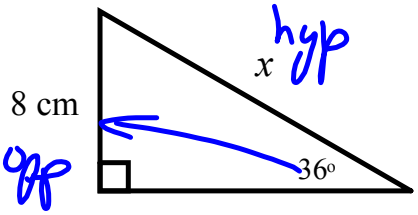
$$\sin A = \frac{opp}{hyp} \qquad \cos A = \frac{adj}{hyp} \qquad \tan A = \frac{opp}{adj}$$

RECIPROCAL Trig Ratios x^{-1} $\frac{1}{x}$

COSECANT OF "A"	SECANT OF "A"	COTANGENT OF "A"
$\csc A = \frac{hyp}{opp}$	$\sec A = \frac{hyp}{adj}$	$\cot A = \frac{adj}{opp}$
$\csc A = \frac{1}{\sin A}$	$\sec A = \frac{1}{\cos A}$	$\cot A = \frac{1}{\tan A}$

Ex.3 Using a reciprocal trig ratio, calculate x, to two decimal places.

Label 1st



$\frac{hyp}{opp} = \csc 36°$

$\csc 36° = \frac{x}{8}$

$x = 8\csc 36°$

$= 8\left(\frac{1}{\sin 36°}\right)$

$\doteq 13.610$

$\doteq 13.61$ cm

$8 \times (\sin 36°)^{-1}$ *use* $\frac{1}{x}$

13.610

Ex.4 Calculate θ, to one decimal place.

$\sec\theta = 1.65$

$\cos\theta = \frac{1}{1.65}$

$\theta = \cos^{-1}\left(\frac{1}{1.65}\right)$

$\doteq 52.69$

$\doteq 52.7°$

52.69

Are there any Homework Questions you would like to see on the board?

Last day's work: p. 274 #1 - 8

Today's Homework Practice includes:

pp. 280-282 #1 – 12, 14 [18, 20]