U6L2 Tangent Ratio

May-04-15 10:29 AM

★★★ Calculators must be in DEGREE mode (bad modes are GRAD 😕 & RAD 😕)

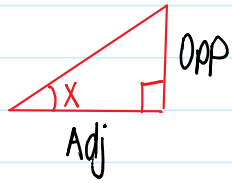
Ⓐ Review SOH CAH TOA

place angle here ↓

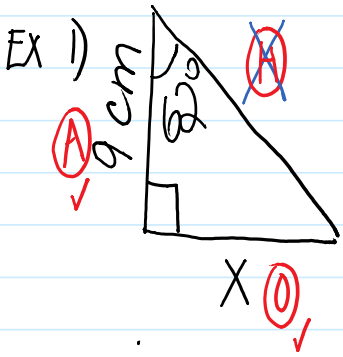
$\tan \square = \frac{O}{A}$ (opposite / adjacent)

Ⓑ The tangent ratio provides a link between the OPP & ADJ sides

$\tan X^\circ = \frac{\text{opposite}}{\text{adjacent}}$



Ex 1)



Steps: solve for X.

#1) Label triangle O, A, H

#2) Choose a trig ratio to solve for x [SOH CAH TOA]

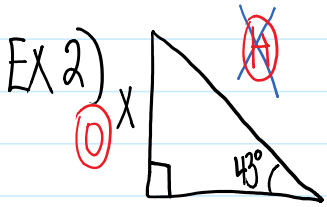
#3) $\tan 62^\circ = \frac{O}{A}$ ← solve°

$\frac{\tan 62^\circ}{1} = \frac{x}{9}$ CROSS MULTIPLY

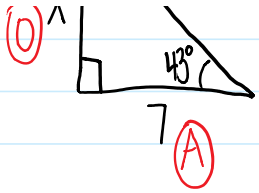
$1x = 9 \tan 62^\circ$

$x = 16.93$ ✓

Ex 2)



TOA $\tan 45^\circ = \frac{O}{A}$



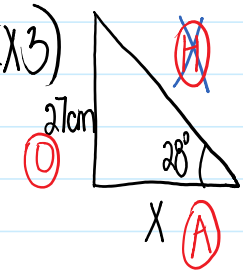
A

$\tan 43° = \frac{X}{7}$

$1X = 7 \tan 43°$

$X = 6.53$ ✓

EX3)



TOA $\tan 28° = \frac{O}{A}$

$\frac{\tan 28°}{1} = \frac{27}{X}$

Q how will we isolate X

A: divide both sides by tan 28

$X \tan 28° = 27$

$\frac{X \tan 28°}{\tan 28°} = \frac{27}{\tan 28°}$

$X = 50.78$ ✓

Assignment:

U6L2 WKST #1-3: A, C, #4 A C D, #5 C /10 = %