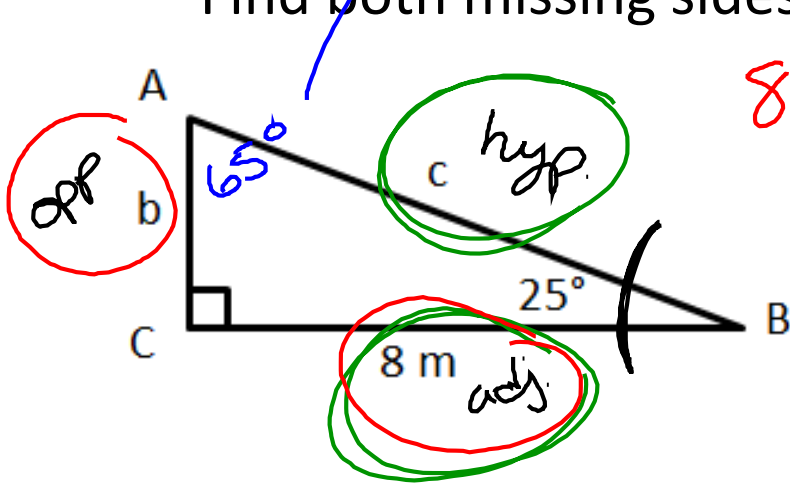


Friday, April 19, 2019

- Warm-up $\rightarrow 180 - (25 + 90)$

- Find both missing sides of the right triangle:



$$8 \cdot \tan(25) = \frac{b}{8} \cdot 8$$

$$3.730_m = b$$

$$c \cdot \cos(25) = \frac{8}{c}$$

$$\frac{c \cdot \cos(25) = 8}{\cos(25) \quad \cos(25)}$$

$$c = 8.827_m$$

- Inverse Trig Functions
- Using inverse trig to find angles

Objectives

Content: I will apply right triangle trigonometry to calculate missing angles.

Social: I will help those around me who do not understand.

Language: I will clearly define **inverse function** and what it means in my notes.

Inverse Trig Functions

~~1. $\sin(\theta) = \left(\frac{3}{7}\right)$~~ $\sin^{-1}\left(\frac{3}{7}\right)$

$\theta = 25.376^\circ$

~~2. $\cos(\theta) = 0.5431$~~ $\cos^{-1}(0.5431)$

$\theta = 57.105^\circ$

3. $\tan(x) = 0.5431$

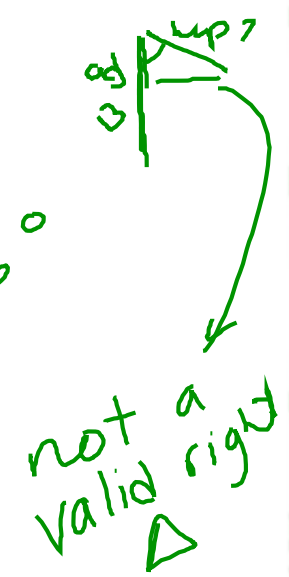
$x = 28.506^\circ$

4. $\tan(B) = 3.5$ $\left(\frac{7}{2}\right)$

$B = 74.054^\circ$

5. $\cos(A) = \frac{13}{7}$ $\frac{\text{adj}}{\text{hyp}}$

→ should be largest



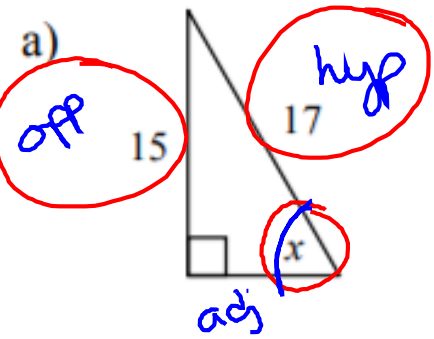
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Using Inverse Trig Functions $\rightarrow x = 35.685^\circ$

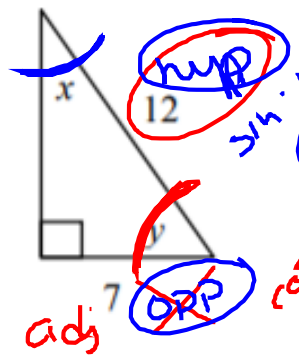


$$\sin^{-1} \left(\sin(x) \right) = \left(\frac{15}{17} \right)$$

$$x = 61.927^\circ$$

$$\tan^{-1} \left(\tan(\theta) \right) = \left(\frac{8}{5} \right)$$

$$\theta = 57.994^\circ$$

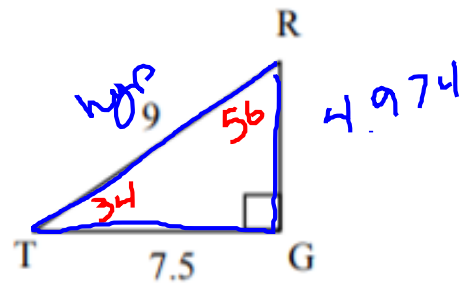
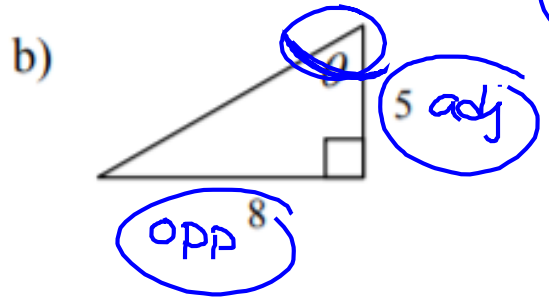


$$\sin^{-1} \left(\sin(x) \right) = \left(\frac{7}{12} \right)$$

$$x = 35.685^\circ$$

$$\cos^{-1} \left(\cos(y) \right) = \left(\frac{7}{12} \right)$$

$$y = 54.314$$



$$m\angle R = 56.442^\circ$$

$$m\angle T = 33.558^\circ$$

$$t = 4.974$$

Pythagorean Theorem

$$7.5^2 + t^2 = 9^2$$

$$-7.5^2$$

$$t = \sqrt{9^2 - 7.5^2}$$

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Soh Cah Toa

Zombie

Turn in:

Zombie } with
Snowman } work

With weekly sheet

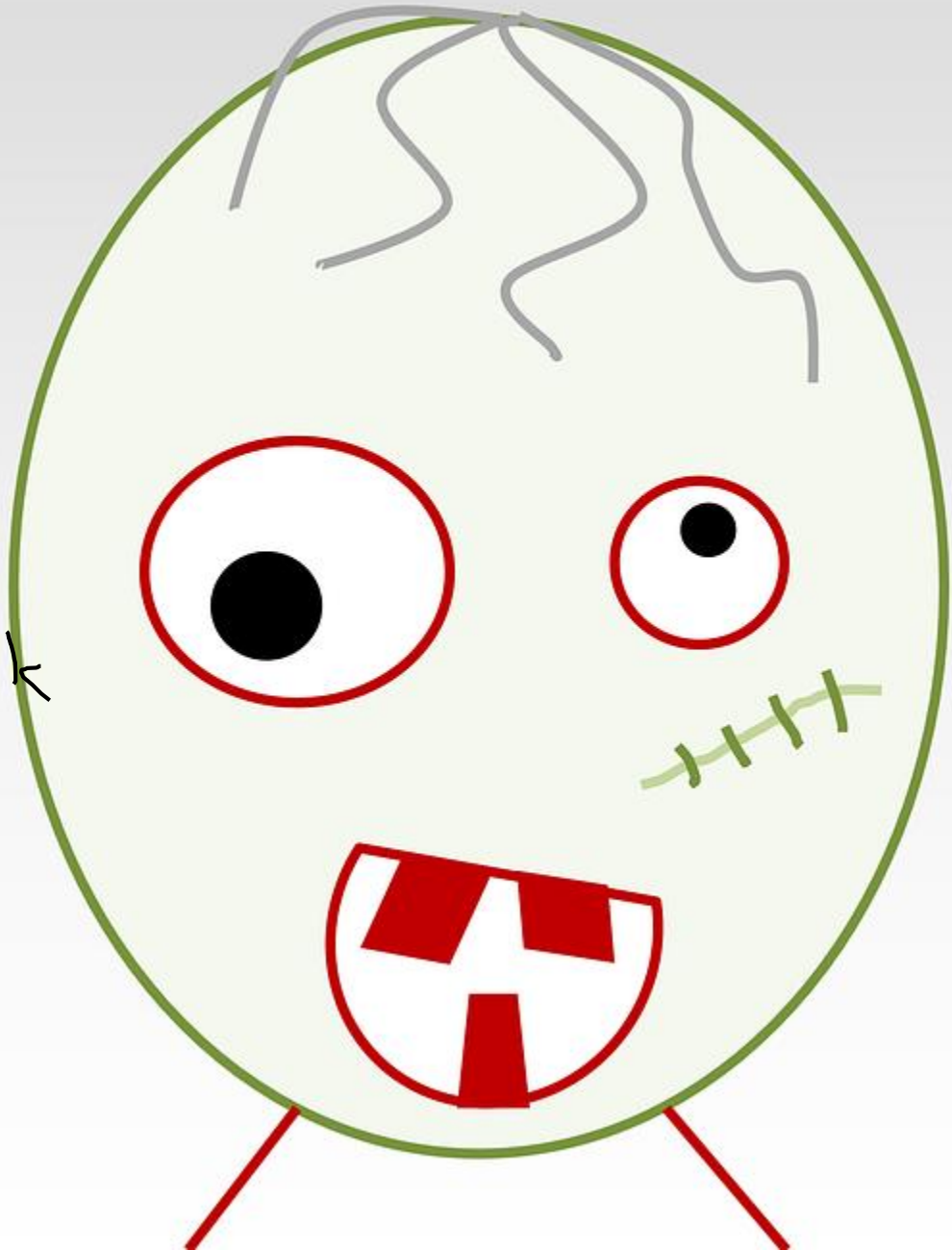
\$ work from homework

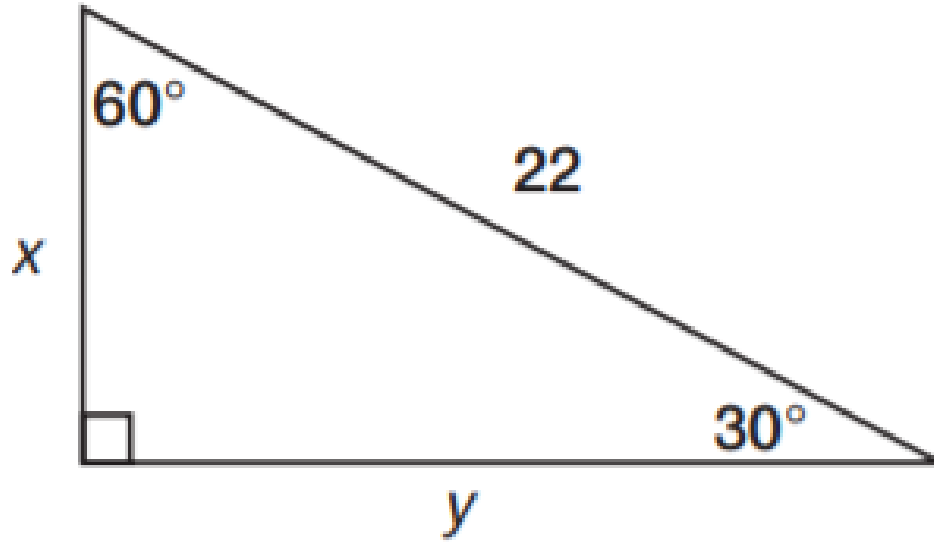
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What is the length of y in the triangle above?

- a. 11
- b. $11\sqrt{2}$
- c. $11\sqrt{3}$
- d. $22\sqrt{2}$
- e. $22\sqrt{3}$

Exit Slip

- Set up the ratio needed & compute a solution.
- Determine and explain a strategy to choose an answer when NONE of them fit your solution the way you have it.
- Choose an answer

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