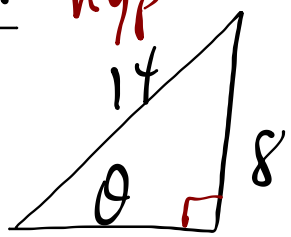
Hw???

1d)

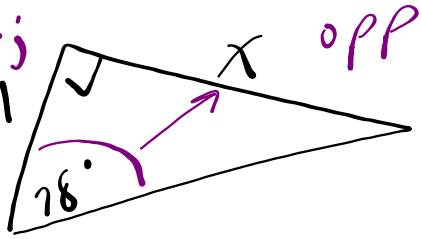


SOHCAH TOA

$\sin^{-1}\sin\theta = \sin^{-1}\left(\frac{8}{14}\right)$

$\theta = 35°$

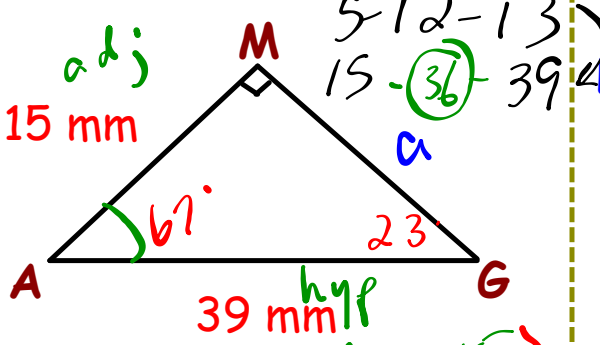
2e)



$11\tan 78° = \frac{x}{11}(11)$

$51.8 = x$

EXAMPLE - Solve the triangle (find ALL sides and angles)

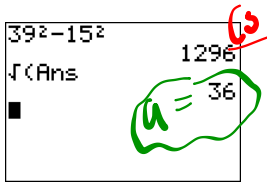


5-12-13 ×3
15-36-39

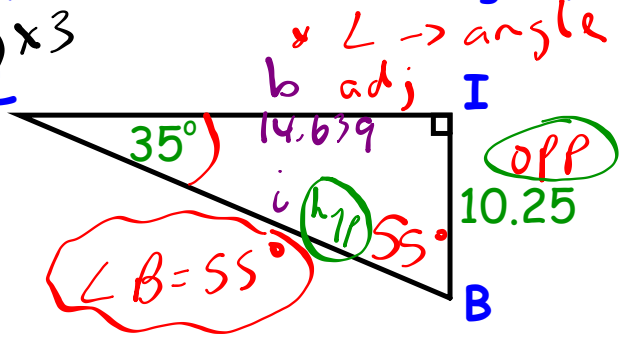
$\cos^{-1}\cos A = \left(\frac{15}{39}\right)^{-1}$

$\angle A = 67°$

$\angle G = 23°$



$a = 36$



$\angle B = 55°$

$\tan 35° = \frac{10.25}{b}$

$b = \frac{10.25}{\tan 35}$

$b = 14.639$

$\sin 35 = \frac{10.25}{i}$

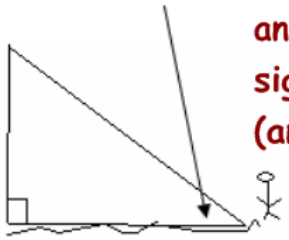
$i = \frac{10.25}{\sin 35}$

$i = 17.87$

Applications of Right Angle Trigonometry

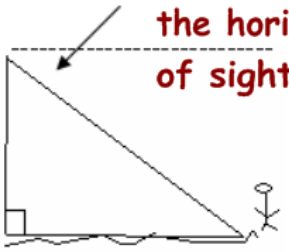
ANGLE OF ELEVATION/DEPRESSION

Angle of elevation - is the angle between the ground and the line of sight. (angle of inclination)



Always from the GROUND up

Angle of Depression - is the angle between the horizon and the line of sight.



Always outside the triangle

Example 1:

Two trees are 100m apart. From a point on midway between them, the angles of elevation to their tops are 8° and 13°. How much taller is one tree than the other?

① $\tan 13° = \frac{x}{50}$

$50\tan 13° = x$

$11.5 = x$

opp

adj

② $\tan 8° = \frac{y}{50}$

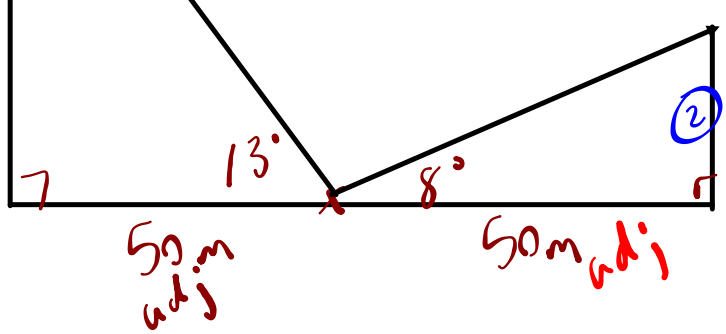
$50\tan 8° = y$

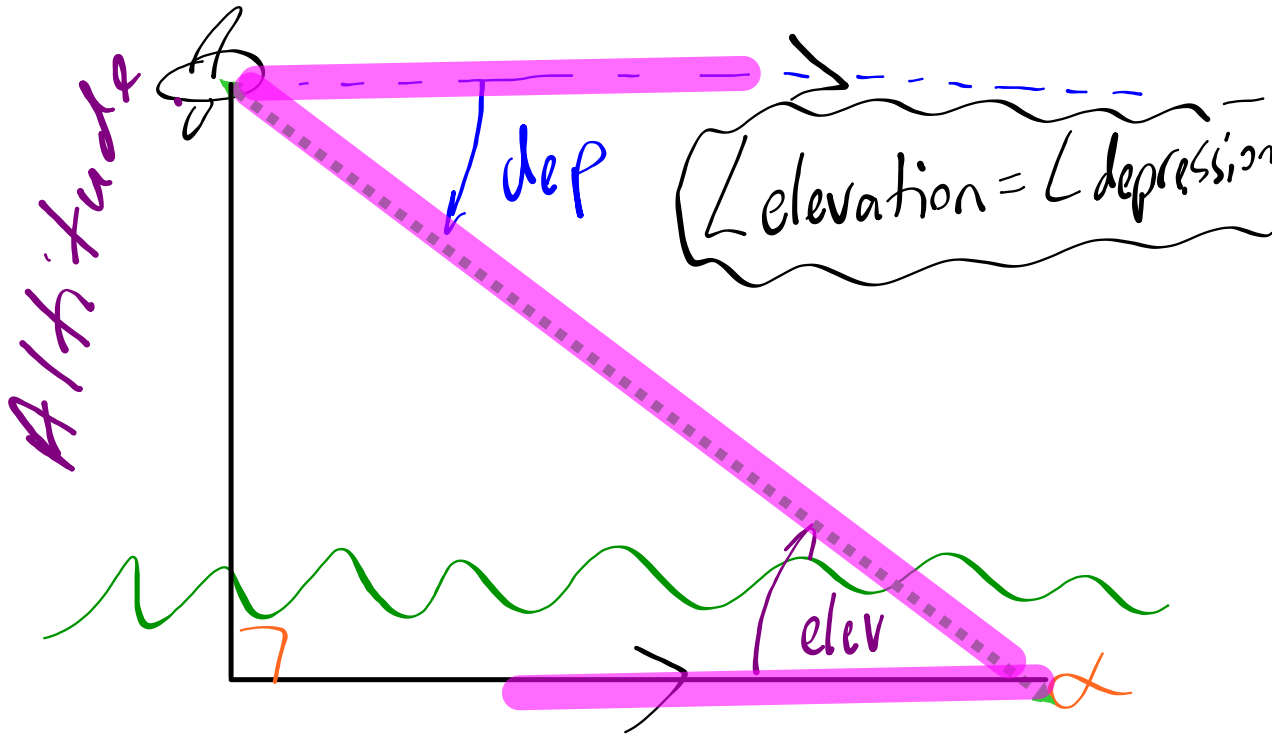
$7.0 = y$

③ $T = x - y$

$T = 11.5 - 7$

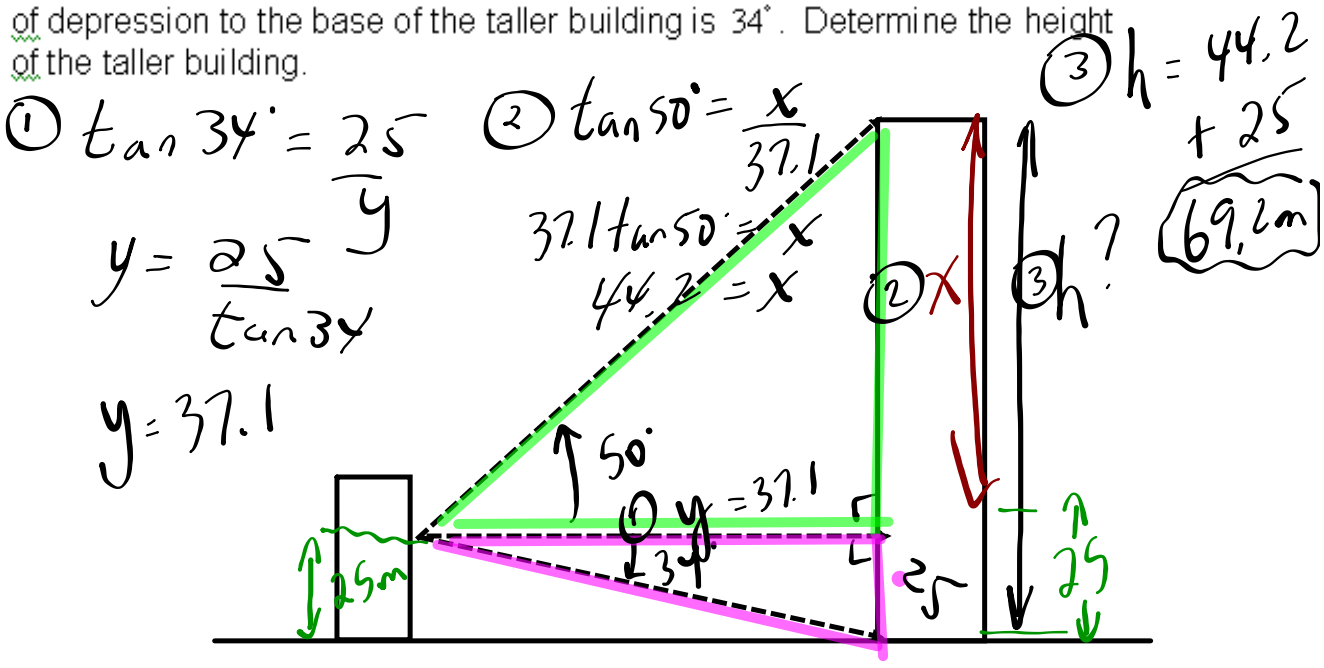
$T = 4.5\text{ m}$




Altitude
dep
∠elevation = ∠depression
elev

Example 2:

The 8th floor of an apartment building is 25m above the ground. From the 8th floor, the angle of elevation to the top of the other building is 50°. The angle of depression to the base of the taller building is 34°. Determine the height of the taller building.



HOMEWORK: 10.7 (Solving) #10, 11abd

10.8 (Applications) #1, 3, 4, 5, 6