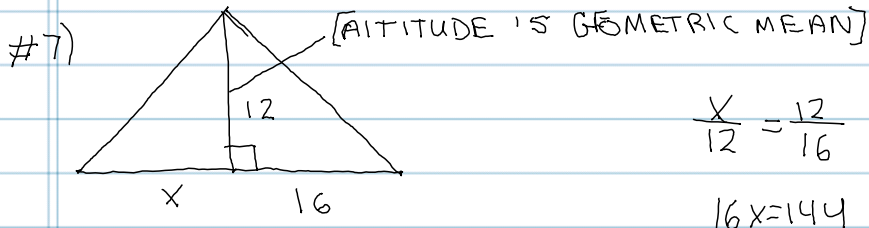


GEOMETRY B3

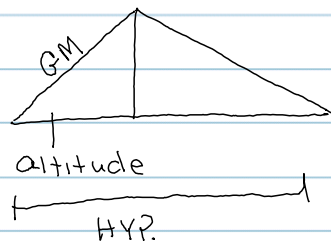
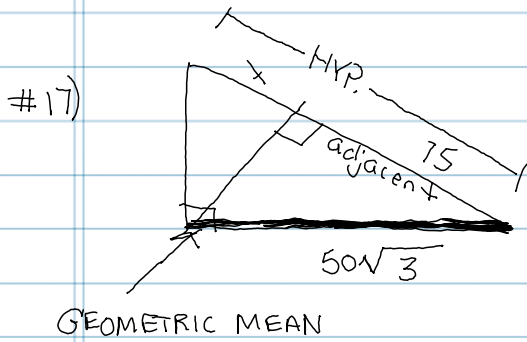


$$\frac{x}{12} = \frac{12}{16}$$

$$16x = 144$$

$$x = 9$$

	S	M	L
H	8	?	16x
LL	12	16	?
SL	x	12	?



$$\sqrt{2} \times \sqrt{2} = \sqrt{4} = 2$$

$$\sqrt{3} \times \sqrt{3} = \sqrt{9} = 3$$

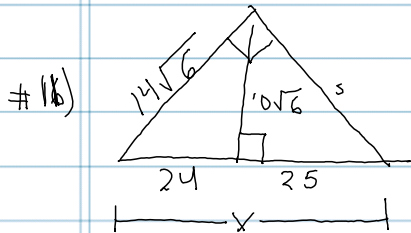
$$2\sqrt{3} \times 2\sqrt{3} = 4 \times 3 = 12$$

$$5\sqrt{2} \times 5\sqrt{2} = 25 \times 2 = 50$$

$$\frac{x}{50\sqrt{3}} = \frac{50\sqrt{3}}{75}$$

$$\frac{75x}{75} = \frac{7500}{75}$$

$$x = 100$$



$$\frac{24}{14\sqrt{6}} = \frac{14\sqrt{6}}{x}$$

$$\frac{24}{x} = \frac{x}{25}$$

$$x^2 = 600$$

$$x = \sqrt{600}$$

~~x = 10√6~~

$$x = 10\sqrt{6}$$

	S	M	L
H	x	x=24	14√6
LL	?	?	?
SL	14√6	?	24

$$24x = 14\sqrt{6} \times 14\sqrt{6}$$

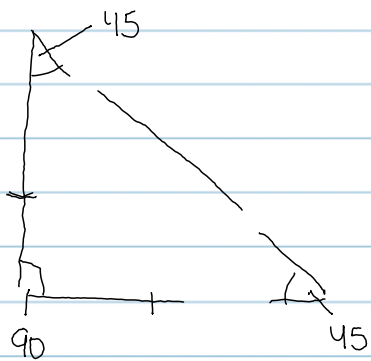
$$24x = 1,176$$

$$x = 49$$

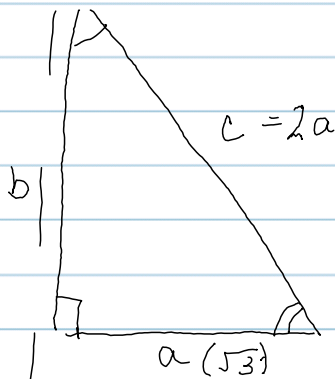
$$\frac{x}{14\sqrt{6}} = \frac{14\sqrt{6}}{24}$$

GEOMETRY BE (CONT).

[SPECIAL RIGHT TRIANGLES] -

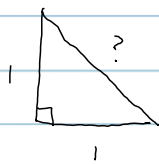


45 45 90 right triangle



30 60 90 right angle leg.

for a 30 60 90 right triangle the hypotenuse is 2x the short leg. The long leg is $\sqrt{3}$ times the short



$$b^2 + a^2 = c^2$$

$$c^2 = a^2 + b^2$$

$$c = \sqrt{a^2 + b^2}$$

$$c = \sqrt{1 + 1}$$

$$c = \sqrt{2}$$

- c - hyp.
- a - short
- b - long
- ~~c~~ c = 2a
- b = a√3
- a = a

for a 45 45 90 right triangle the hypotenuse is $\sqrt{2} \times a$

leg.

$$\sqrt{8}$$

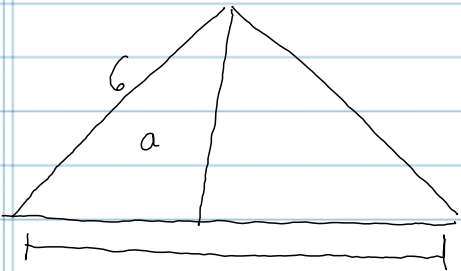
$$\sqrt{4} \sqrt{2}$$

$$2\sqrt{2}$$

$$\sqrt{18}$$

$$\sqrt{9} \sqrt{2}$$

GEOMETRY B3
(CONTINUED)



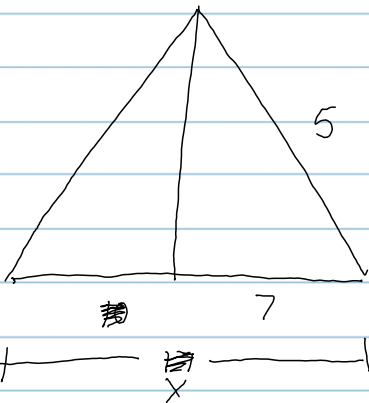
(SIDE) GEOMETRIC MEAN
THE HYPOTNUSE TO ADJACENT
SEGMENTS

$b=6$
 $a=2$
 $c=?$

$$\frac{x}{6} = \frac{6}{2}$$

$$\frac{2x}{2} = \frac{36}{2}$$

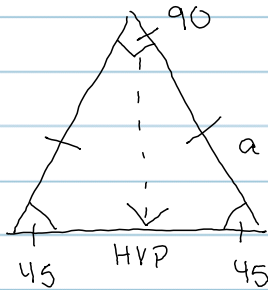
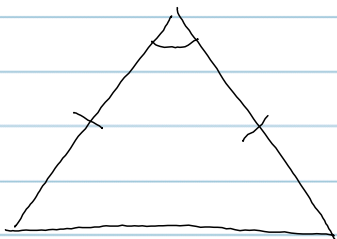
$x=18$



~~$\frac{7}{5} = \frac{5}{x}$~~
 $\frac{7}{5} = \frac{5}{x}$

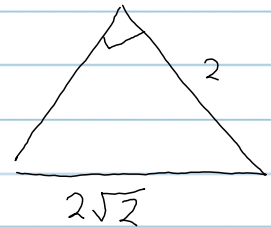
$\frac{25=7x}{7}$

$x=3.57$



45 45 90 right isosceles triangle

$h = a\sqrt{2}$

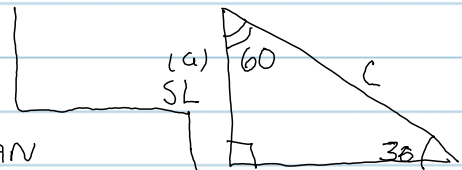


$h = a\sqrt{2}$

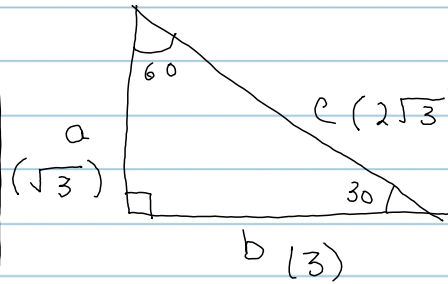
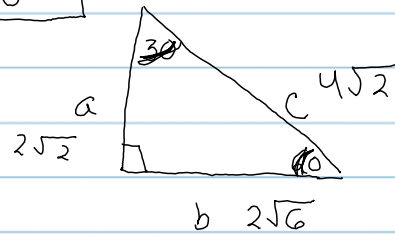
~~$4\sqrt{2} = a\sqrt{2}$~~
 ~~$\frac{4\sqrt{2}}{\sqrt{2}} = \frac{a\sqrt{2}}{\sqrt{2}}$~~
 ~~$4 = a$~~
 $\frac{4\sqrt{2}}{\sqrt{2}} = a$

$\frac{2\sqrt{2}}{\sqrt{2}} = \frac{a\sqrt{2}}{\sqrt{2}}$
 $2 = a$

$4\sqrt{4} = a$
 $4 \cdot 2 = a \quad a=8$



$n=3a$
 $(c)=2(a)$
 $\frac{LL}{(b)} = \frac{\sqrt{3}a}{(b)}$



$h = 2\sqrt{3}(sl)$
 $LL = \sqrt{3}(sl)$
 $SL = \frac{LL}{\sqrt{3}}$

$\frac{y}{\sqrt{3}} = \frac{2 \times \sqrt{3}}{\sqrt{3}}$

$x = \frac{y}{\sqrt{3}}$

$\frac{SL-LL}{\sqrt{3}} \quad SL = \frac{H}{2}$

GEOMETRY B3

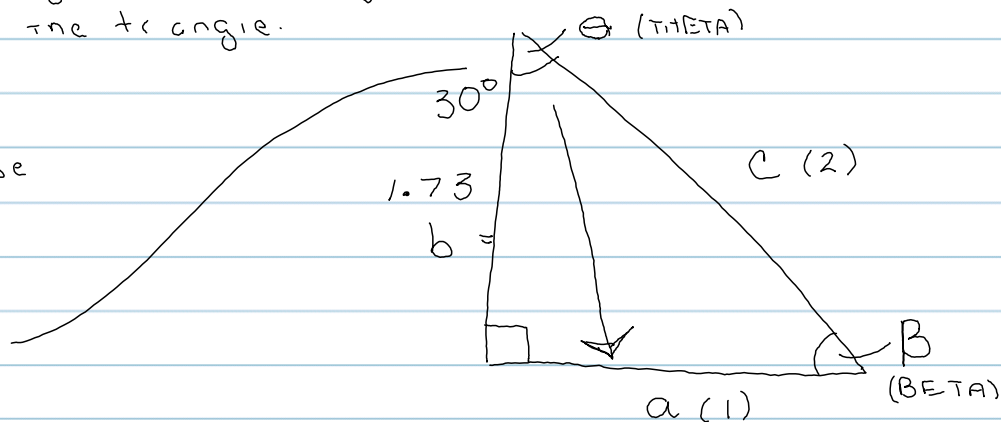
THREE BASIC TRIGONOMETRIC IDENTITIES -

They relate the angles of a triangle (right-angled) to the ratio of the sides of the triangle.

$SIN \theta = \frac{\text{opposite}}{\text{hypotenuse}}$
(Sine)

$SIN \theta = \frac{1}{2}$

2nd $\frac{\sin^{-1}}{\sin^{-1}} (.5)$



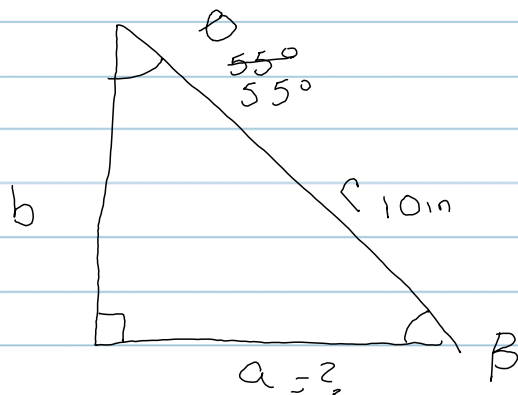
$SIN 60 (\beta) = \frac{?}{2} \cdot 2 \quad ? = 1.73$

ex: $5.25 = \frac{x}{5} \cdot 5$
 $x = 125$

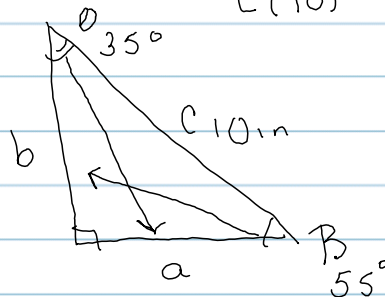
$SIN \theta$
 $55^\circ = \frac{?(a)}{10}$

$10(SIN 55) = a$
 $.819$
 $10(.819) = 8.19$

$\frac{8.19}{10} = \frac{\text{opposite}}{\text{hyp}} = \text{circle}$
Shift SIN -

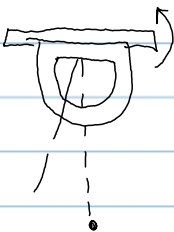
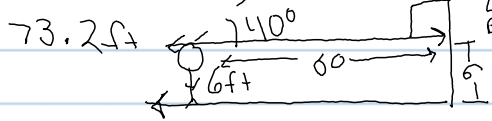


$COS \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$
 $COS \theta = \frac{b}{c(10)} \quad COS \theta = .819$



$TAN \theta = \frac{\text{opposite}}{\text{adjacent}}$

$TAN 40 = \frac{x}{80}$
 $80 \times .84 = 67.2$

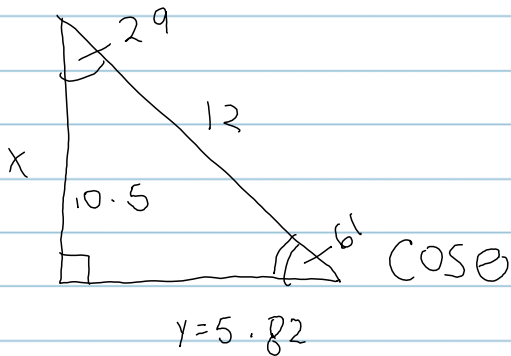
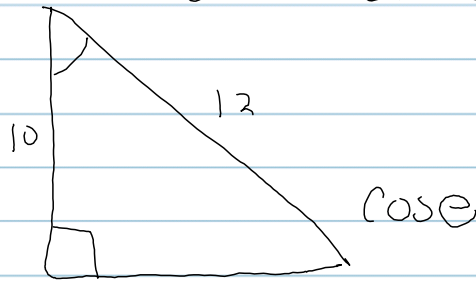
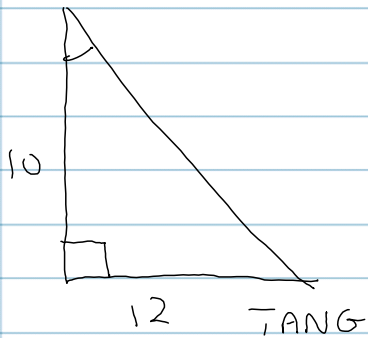
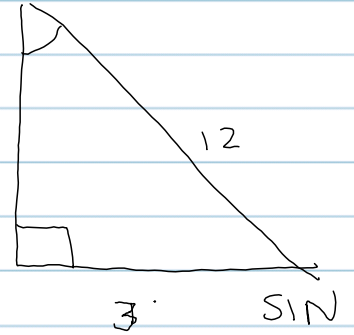
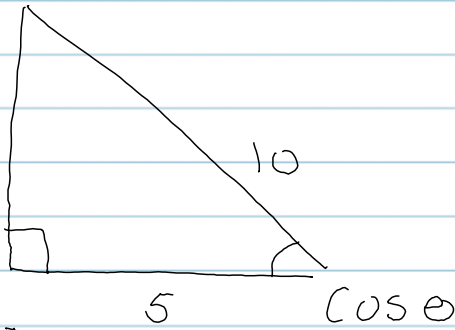


GEOMETRY B3

$$\text{SIN} = \frac{\text{OP}}{\text{hyp}}$$

$$\text{COS} \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\text{TANG} = \frac{\text{OP}}{\text{ADJ}}$$

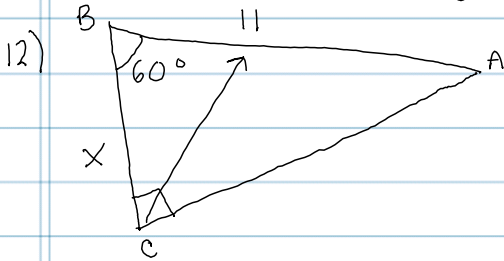
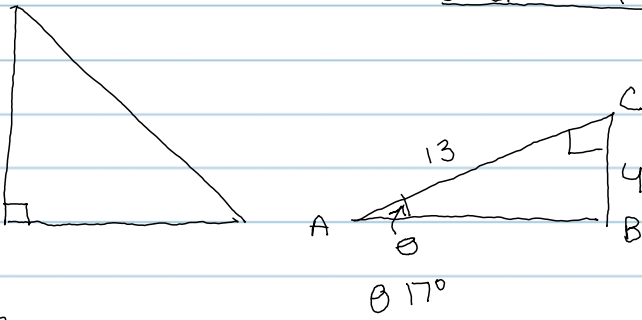


$$\text{COS} \theta 29 = \frac{x}{12} \cdot 12$$

$$\text{SIN} 29 = \frac{y}{12}$$

$$12 (.48) =$$

GEOMETRY B3



$$\theta = 6 \quad \frac{11}{1} \cos 60 = \frac{x}{11} \cdot \frac{11}{1}$$

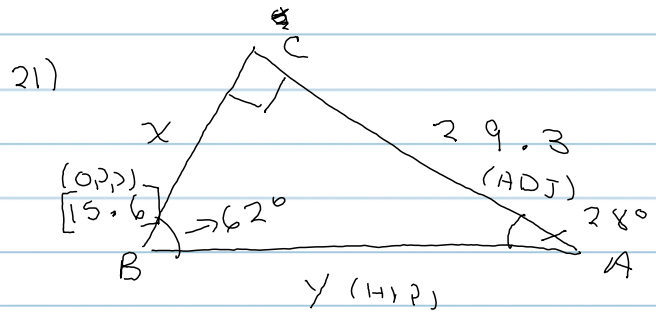
HYP = 11

ADJ = x

$$x = 11 \times \cos 60$$

$$x = 11 \times 0.5$$

$$x = 5.5$$



TAN B

OPP

ADJ

$$\tan 28 = \frac{x}{29.3} \cdot 29.3$$

$$x = 29.3 \times \tan 28$$

$$x = 29.3 \times 0.532$$

$$x = 15.6$$

B

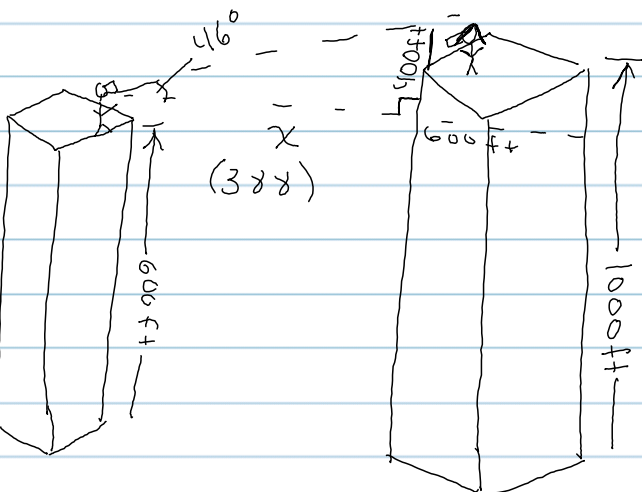
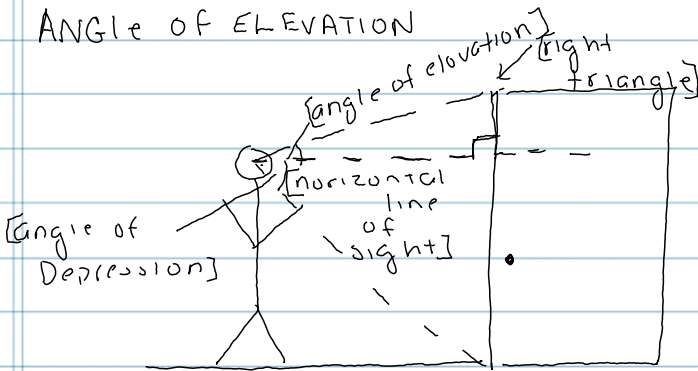
ADJ = 29.3

Y HYP

$$\cos 28 = \frac{29.3}{y} \cdot y$$

$$y = \frac{29.3}{\cos 28} = \frac{29.3}{0.8829}$$

$$y = 33.3$$



$$\tan 46 = \frac{400}{x} \cdot x$$

$$1.0355$$

$$\frac{400}{1.03}$$

$$388.34 \text{ ft}$$

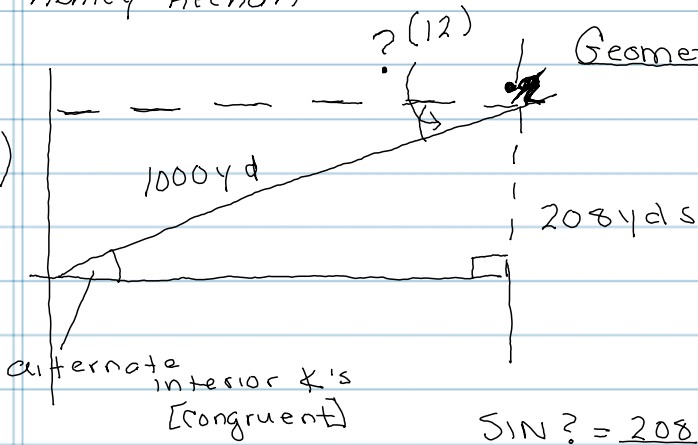
Ashley Keenan

10th MAY 2011

Geometry B3

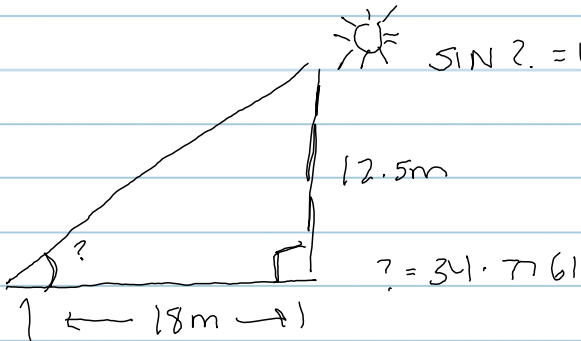
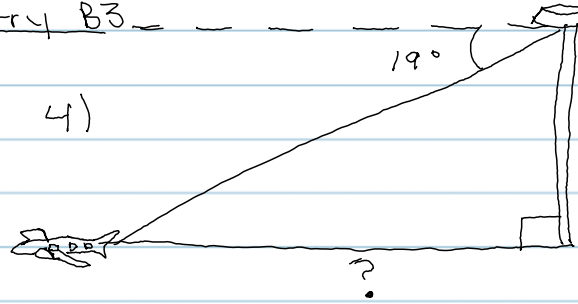
MR. LALIME

3.)

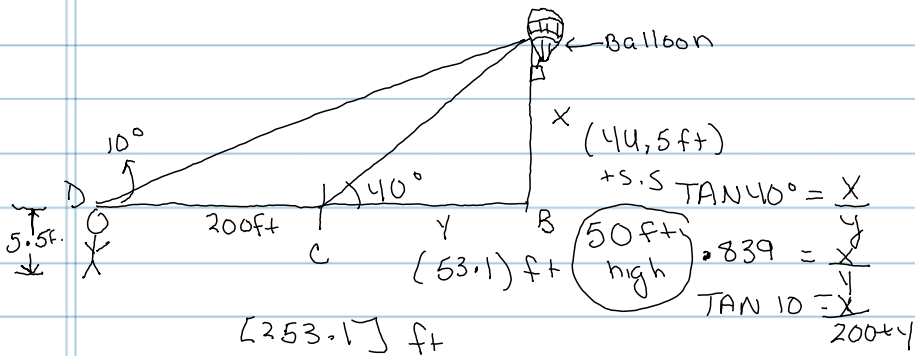


$$\sin ? = \frac{208}{1000}$$

4.)



7.)



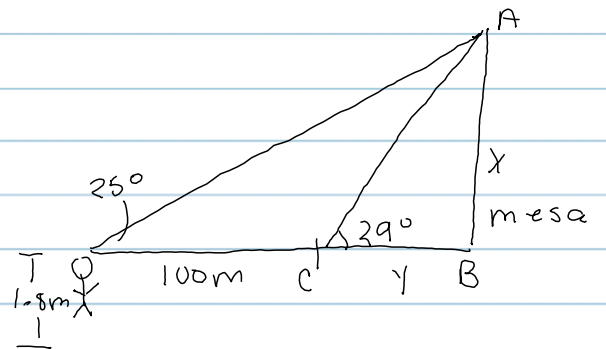
$$\tan 10 = \frac{x}{235.1}$$

$$\cdot 176 \cdot$$

$$x = 44.5 \text{ ft}$$

$$\cdot 176 = \frac{x}{200+y}$$

$$\cdot 839 y =$$



$$\cdot 839 = \frac{x}{y}$$

$$\cdot 176 = \frac{x}{200+y}$$

$$\cdot 839 y = x$$

$$35.2 + 176 y = x$$

$$\cdot 839 y = 35.2 + 176 y$$

$$- 176 y \quad - 176 y$$

$$\frac{\cdot 663 y = 35.2}{\cdot 663 \quad \cdot 663}$$

$$y = 53.09$$