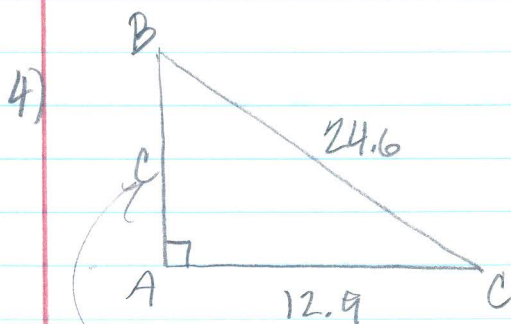


## Right Triangles Ws1

1)  $\sin 43^\circ 19' 51'' \approx 0.6862$

2)  $\sec 129^\circ = \frac{1}{\cos 129^\circ} \approx -1.5890$

3)  $\tan(-216.73^\circ) \approx -0.7462$



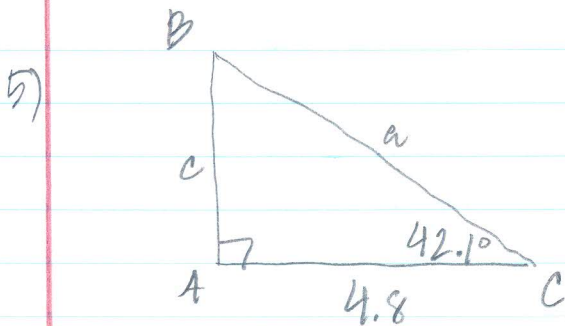
$A = 90^\circ$        $a = 24.6$

$B = 31.6^\circ$        $b = 12.9$

$C = 58.4^\circ$        $c = 20.9$

$$\sin B = \frac{12.9}{24.6}$$

$$(24.6)^2 - (12.9)^2 = c^2$$
$$c = \sqrt{438.75}$$



$A = 90^\circ$        $a = 6.5$

$B = 42.1^\circ$        $b = 4.8$

$C = 47.9^\circ$        $c = 4.3$

$$\frac{c}{4.8} = \tan 42.1^\circ$$

$$\frac{4.8}{a} = \cos 42.1^\circ$$

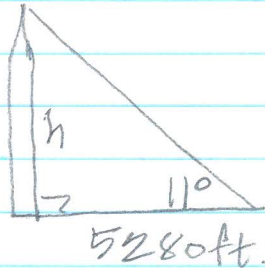
$$c = 4.8 \tan 42.1^\circ$$

$$a = \frac{4.8}{\cos 42.1^\circ}$$

# Right Triangles WS I

# 6-15

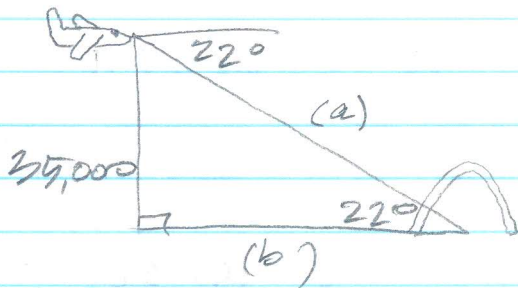
6)



$$\tan 11^\circ = \frac{h}{5280}$$

$$h = 5280 \cdot \tan 11^\circ = \underline{\underline{1026.3 \text{ feet}}}$$

7)



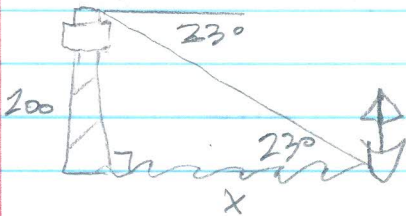
$$(a) \sin 22^\circ = \frac{35000}{(a)}$$

$$a = \frac{35000}{\sin 22^\circ} = \underline{\underline{93431.4 \text{ ft}}}$$

$$(b) \tan 22^\circ = \frac{35000}{b}$$

$$b = \frac{35000}{\tan 22^\circ} = \underline{\underline{86226.0 \text{ ft}}}$$

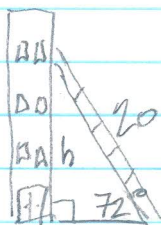
8)



$$\tan 23^\circ = \frac{200}{x}$$

$$x = \frac{200}{\tan 23^\circ} = \underline{\underline{471.2 \text{ feet}}}$$

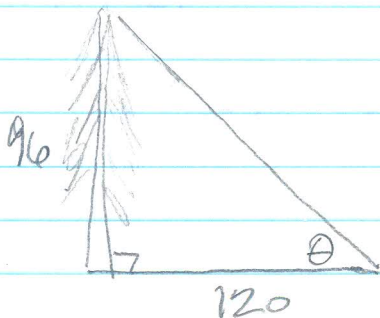
9)



$$\sin 72^\circ = \frac{h}{20}$$

$$h = 20 \cdot \sin 72^\circ = \underline{\underline{19.0 \text{ ft}}}$$

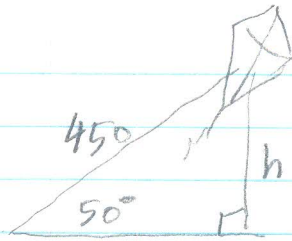
10)



$$\tan \theta = \frac{96}{120}$$

$$\theta = \tan^{-1}\left(\frac{96}{120}\right) = \underline{\underline{38.7^\circ}}$$

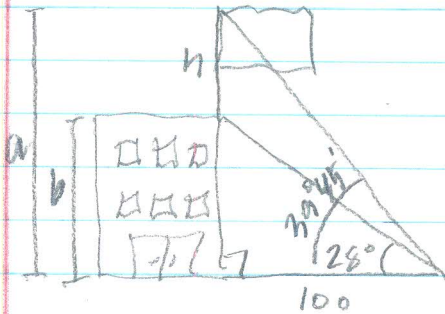
11)



$$\sin 50^\circ = \frac{h}{450}$$

$$h = 450 \cdot \sin 50^\circ = \underline{\underline{344.7 \text{ ft}}}$$

12)



$$\tan 39^\circ 45' = \frac{a}{100}$$

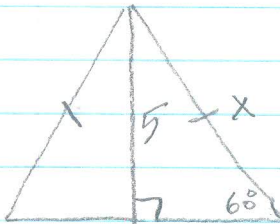
$$a = 100 \tan 39^\circ 45' = 83.2$$

$$\tan 28^\circ = \frac{b}{100}$$

$$b = 100 \tan 28^\circ = 53.2$$

$$h = a - b = \underline{\underline{30 \text{ ft}}}$$

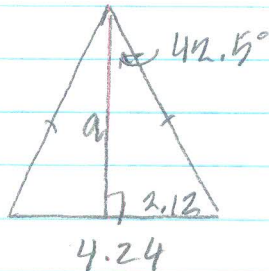
13)



$$\sin 60^\circ = \frac{5}{x}$$

$$x = \frac{5}{\sin 60^\circ} = \underline{\underline{5.8 \text{ cm}}}$$

14)



$$\tan 42.5^\circ = \frac{2.12}{a}$$

$$a = \frac{2.12}{\tan 42.5^\circ} = \underline{\underline{2.3 \text{ ft}}}$$

15)



$$\sin \theta = \frac{5}{24}$$

$$\theta = \sin^{-1}\left(\frac{5}{24}\right)$$

$$\theta = 12.0^\circ$$