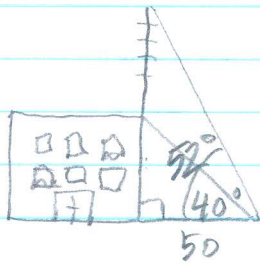


# RIGHT TRIANGLES WS II

1)



$$a) \tan 40^\circ = \frac{b}{50}$$

$$b = 50 \tan 40^\circ$$

$$b = \underline{42.0'}$$

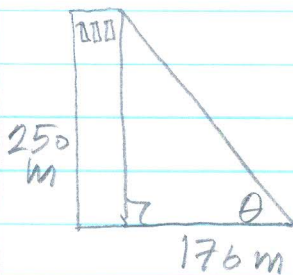
$$b) \tan 52^\circ = \frac{h}{50}$$

$$h = 50 \tan 52^\circ$$

$$h = 64.0'$$

$$\text{ant} = 64 - 42 = \underline{22'}$$

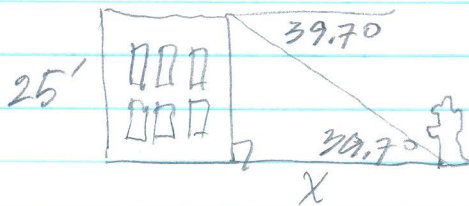
2)



$$\tan \theta = \frac{250}{176}$$

$$\theta = \tan^{-1} \left( \frac{250}{176} \right) = \underline{54.9^\circ}$$

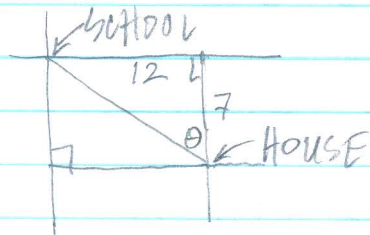
3)



$$\tan 39.7^\circ = \frac{25}{x}$$

$$x = \frac{25}{\tan 39.7^\circ} = \underline{30.1 \text{ ft}}$$

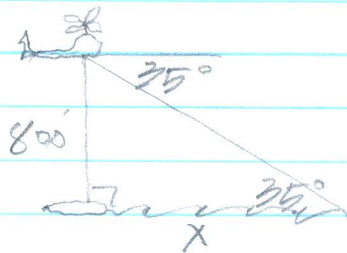
4)



$$\tan \theta = \frac{12}{7}$$

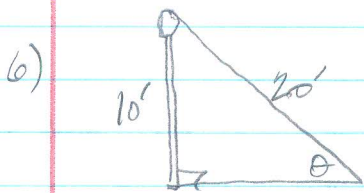
$$\theta = \tan^{-1} \left( \frac{12}{7} \right) = 59.7^\circ \quad \underline{N 59.7^\circ W}$$

5)



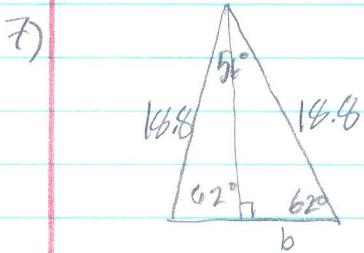
$$\tan 35^\circ = \frac{800}{x}$$

$$x = \frac{800}{\tan 35^\circ} = 1142.5 \text{ ft.}$$



$$\sin \theta = \frac{10}{20}$$

$$\theta = \sin^{-1}\left(\frac{10}{20}\right) = \underline{\underline{30^\circ}}$$



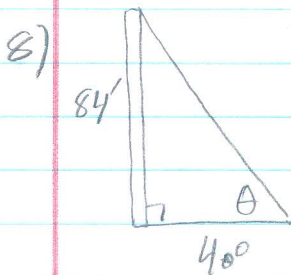
a)  $\cos 62^\circ = \frac{b}{18.8}$

b) 56°

$$b = 18.8 \cos 62^\circ$$

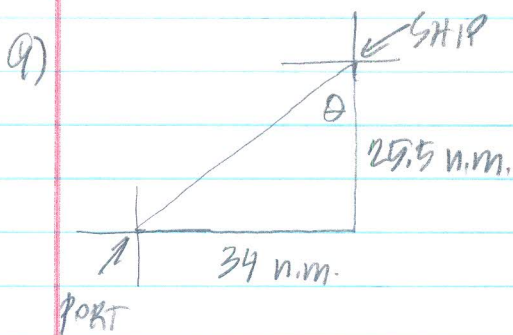
$$b = 8.8$$

$$\text{base} = \underline{\underline{17.7 \text{ cm}}}$$



$$\tan \theta = \frac{84}{40}$$

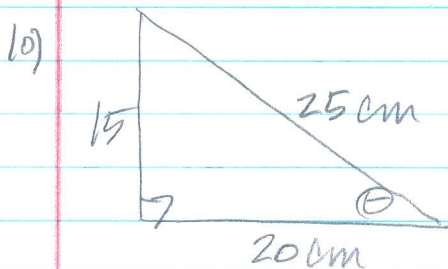
$$\theta = \tan^{-1}\left(\frac{84}{40}\right) = \underline{\underline{64.5^\circ}}$$



$$\tan \theta = \frac{34}{25.5}$$

$$\theta = \tan^{-1}\left(\frac{34}{25.5}\right) = 53.1$$

$$S \ 53.1^\circ \ W$$



$$25^2 - 20^2 = a^2$$

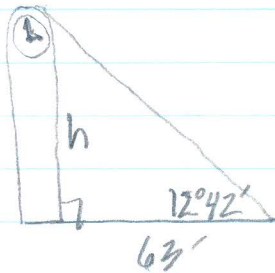
$$\cos \theta = \frac{20}{25}$$

$$\theta = \cos^{-1}\left(\frac{20}{25}\right)$$

$$\theta = \underline{\underline{36.9^\circ}}$$

# RIGHT TRIANGLES WS II CONT'D

11)

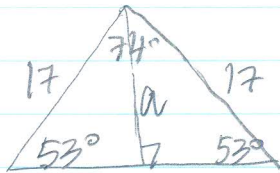


$$\tan 12^\circ 42' = \frac{h}{63}$$

$$h = 63 \tan 12^\circ 42'$$

$$h = \underline{\underline{14.2 \text{ feet}}}$$

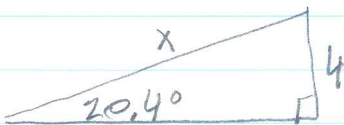
12)



$$\sin 53^\circ = \frac{a}{17}$$

$$a = 17 \sin 53^\circ = \underline{\underline{13.6 \text{ in.}}}$$

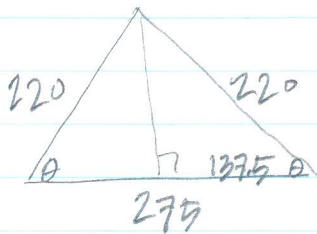
13)



$$\sin 20.4^\circ = \frac{4}{x}$$

$$x = \frac{4}{\sin 20.4^\circ} = \underline{\underline{11.5 \text{ ft.}}}$$

14)



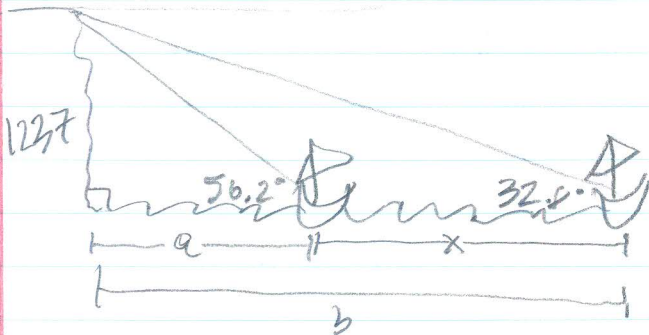
$$\cos \theta = \frac{137.5}{220}$$

$$\theta = \cos^{-1}\left(\frac{137.5}{220}\right)$$

$$\theta = 51.3^\circ$$

$$\begin{aligned} \text{V.A.} &= 180^\circ \\ &- 51.3^\circ \\ &- 51.3^\circ \\ &\hline &77.4^\circ \end{aligned}$$

15)



$$\tan 32.8^\circ = \frac{1237}{b}$$

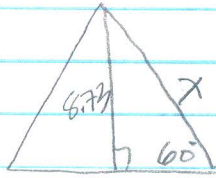
$$b = \frac{1237}{\tan 32.8^\circ}$$

$$\tan 56.2^\circ = \frac{1237}{a}$$

$$x = b - a = \underline{\underline{1091.3 \text{ ft}}}$$

$$a = \frac{1237}{\tan 56.2^\circ}$$

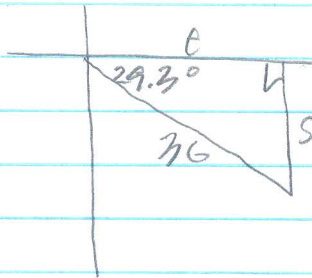
16)



$$\sin 60^\circ = \frac{8.73}{x}$$

$$x = \frac{8.73}{\sin 60^\circ} = 10.1 \quad P = \underline{\underline{30.3 \text{ in.}}}$$

17)



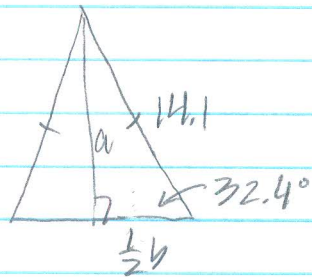
$$\cos 29.3^\circ = \frac{e}{36}$$

$$e = 36 \cos 29.3^\circ = \underline{\underline{31.4 \text{ m}}}$$

$$\sin 29.3^\circ = \frac{s}{36}$$

$$s = 36 \sin 29.3^\circ = \underline{\underline{17.6 \text{ m}}}$$

18)



$$\sin 32.4^\circ = \frac{a}{14.1}$$

$$\text{alt.} = 14.1 \sin 32.4^\circ = 7.6 \text{ cm}$$

$$\cos 32.4^\circ = \frac{\frac{1}{2}b}{14.1}$$

$$\frac{1}{2}b = 14.1 \cos 32.4^\circ$$

$$\text{base} = 23.8 \text{ cm}$$

$$\text{Area} = \frac{1}{2} (23.8)(7.6) = \underline{\underline{90.4 \text{ cm}^2}}$$