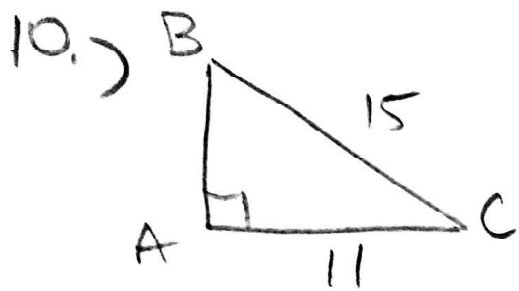


Practice Test

#1-9 Answers are on Pdf.



$$AB = 10.2$$

$$\angle B = 47^\circ$$

$$\angle C = 43^\circ$$

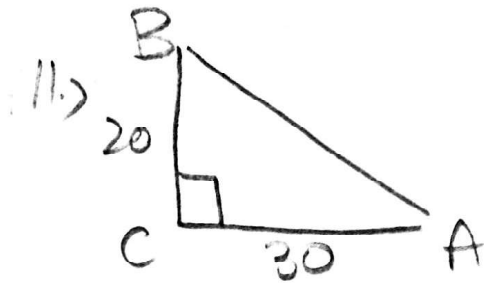
$$AB = \sqrt{15^2 - 11^2}$$

$$= 10.2$$

$$\sin B = \frac{11}{15}$$

$$B = \sin^{-1}(11/15)$$

$$= 47^\circ$$



$$AB = 36.1$$

$$\angle A = 34^\circ$$

$$\angle C = 56^\circ$$

$$AB = \sqrt{20^2 + 30^2}$$

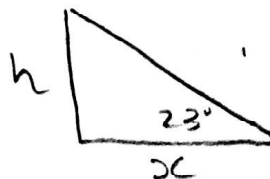
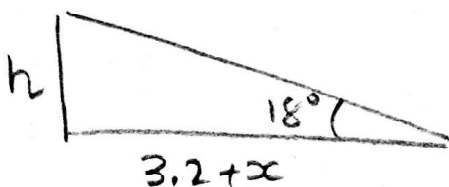
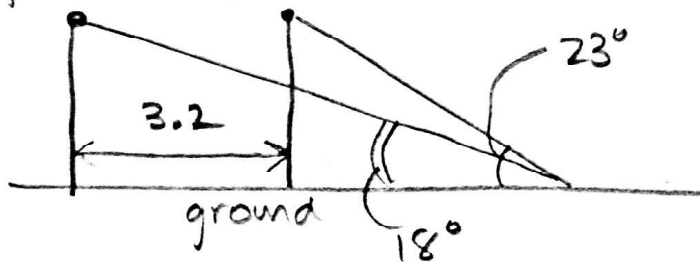
$$= 36.1$$

$$\tan A = \frac{20}{30}$$

$$A = \tan^{-1}(2/3)$$

$$= 34^\circ$$

12.) plane 2 plane 1



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

$$x \tan 23^\circ = h$$

$$\tan 18^\circ = \frac{h}{3.2 + x}$$

$$x \tan 23^\circ = h \quad (3.2 + x) \tan 18^\circ = h$$

$$\Rightarrow x \tan 23^\circ = 3.2 \tan 18^\circ + x \tan 18^\circ$$

$$\Rightarrow x (\tan 23^\circ - \tan 18^\circ) = 3.2 \tan 18^\circ$$

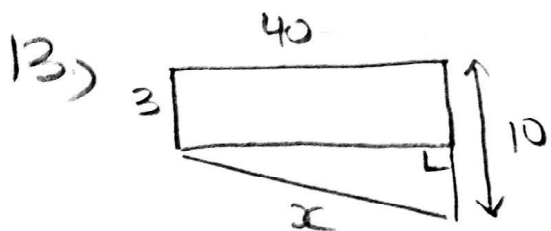
$$x = \frac{3.2 \tan 18^\circ}{\tan 23^\circ - \tan 18^\circ}$$

$$= 10.4$$

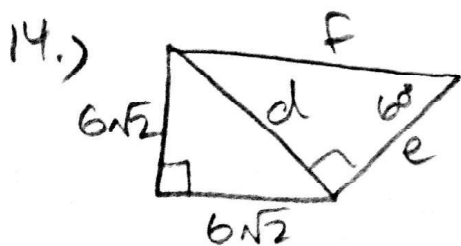
$$\Rightarrow h = 10.4 \tan 23^\circ$$

$$= \underline{\underline{4.4 \text{ miles}}}$$

~~I~~ I do not expect you to solve this for the test, but you should be able to do it for the final.



$$x = \underline{\underline{40.6 \text{ ft}}}$$



$$d = 12$$

$$e = 6.9$$

$$f = 13.9$$

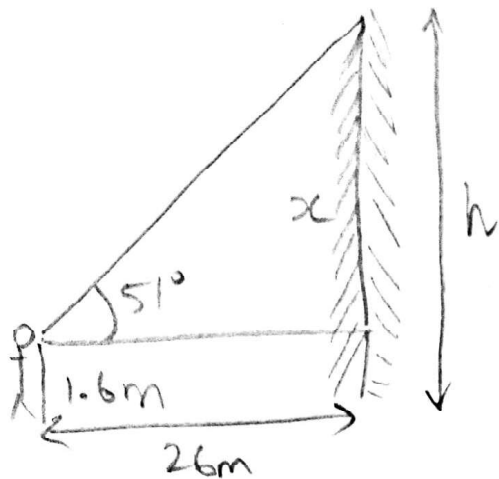
$$d = \sqrt{(6\sqrt{2})^2 + (6\sqrt{2})^2}$$

$$= 12$$

$$\tan 60 = \frac{12}{e}$$

$$e = \frac{12}{\tan 60} = 6.9$$

15.)

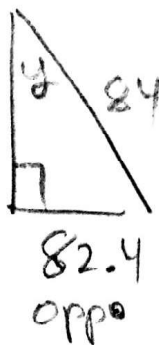
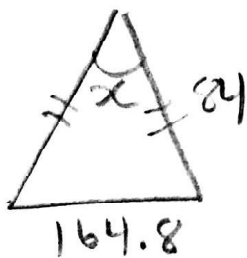


$$\tan 51^\circ = \frac{x}{26}$$

$$x = 26 \tan 51^\circ = 32.1 \text{ m}$$

$$h = 32.1 + 1.6 = \underline{\underline{33.7 \text{ m}}}$$

17.)



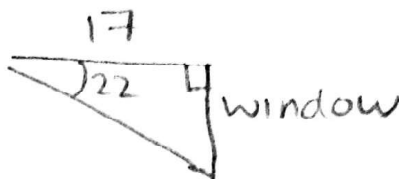
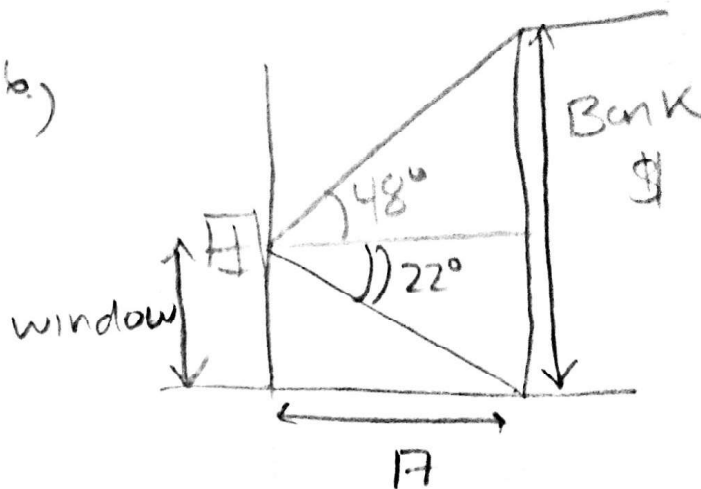
$$\sin y = \frac{82.4}{84}$$

$$y = \sin^{-1} \left(\frac{82.4}{84} \right)$$

$$= 78.8^\circ$$

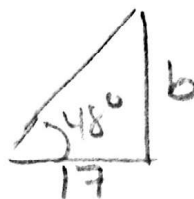
$$\Rightarrow x = 2 \times 78.8 = \underline{\underline{157.6^\circ}}$$

16.)



$$\tan 22^\circ = \frac{\text{window}}{17}$$

$$\text{window} = 17 \tan 22^\circ = \underline{\underline{6.9 \text{ m}}}$$



$$\tan 48^\circ = \frac{b}{17}$$

$$b = 18.9 \text{ m}$$

$$\Rightarrow \text{Bank} = \underline{\underline{25.8 \text{ m}}}$$