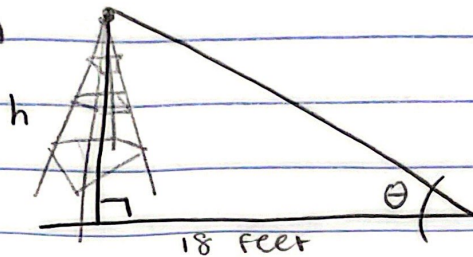


word problems...



3.)



$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\tan\left(\frac{\pi}{3}\right) = \frac{h}{18}$$

$$18 \cdot \tan\left(\frac{\pi}{3}\right) = h$$

$$18\sqrt{3} \text{ ft} = h$$

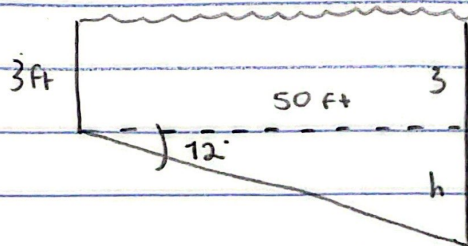
\*math knowledge: use

table to do  $\frac{\sin(\frac{\pi}{3})}{\cos(\frac{\pi}{3})} = \tan(\frac{\pi}{3})$

$$\theta = \frac{\pi}{3}$$

h = height of tower

10.)



$$d = 3 + h$$

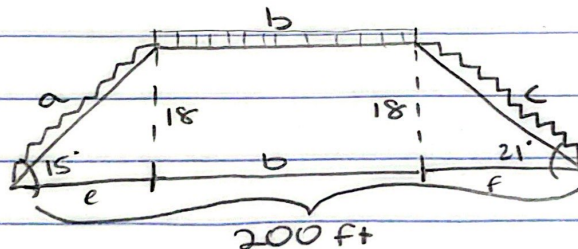
$$\tan 12^\circ = \frac{h}{50}$$

$$50 \cdot \tan(12^\circ) = h$$

$$h = 10.63$$

$$d = 13.63 \text{ ft}$$

25.)



$$b = 200 - e - f$$

$$b = 85.94$$

$$a.) \sin 15^\circ = \frac{18}{a}$$

$$a = \frac{18}{\sin(15^\circ)}$$

$$a = 69.55$$

$$c.) \sin 21^\circ = \frac{18}{c}$$

$$c = \frac{18}{\sin(21^\circ)}$$

$$c = 50.22$$

$$205.71 \text{ ft}$$

$$e.) \tan(15^\circ) = \frac{18}{e}$$

$$e = \frac{18}{\tan 15^\circ}$$

$$e = 67.17$$

$$f.) \tan 21^\circ = \frac{18}{f}$$

$$f = \frac{18}{\tan(21^\circ)}$$

$$f = 46.89$$