

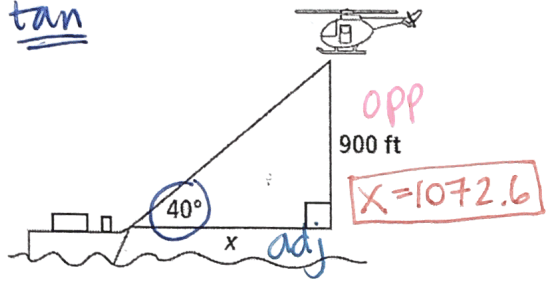
8-5 Additional Practice

Problem Solving With Trigonometry

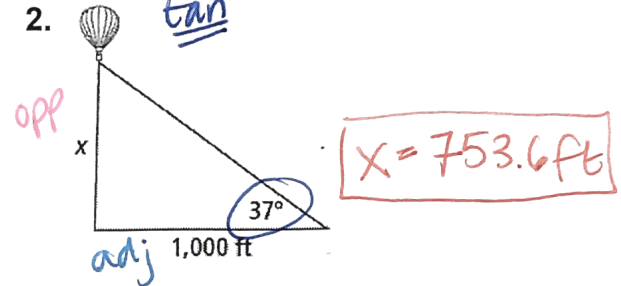
Problems worked out on next page.

Find the value of x. Round to the nearest tenth.

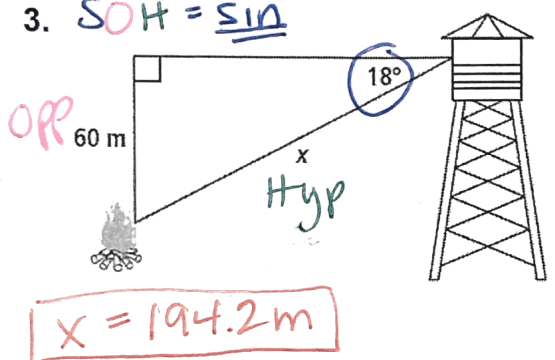
1. TOA
tan



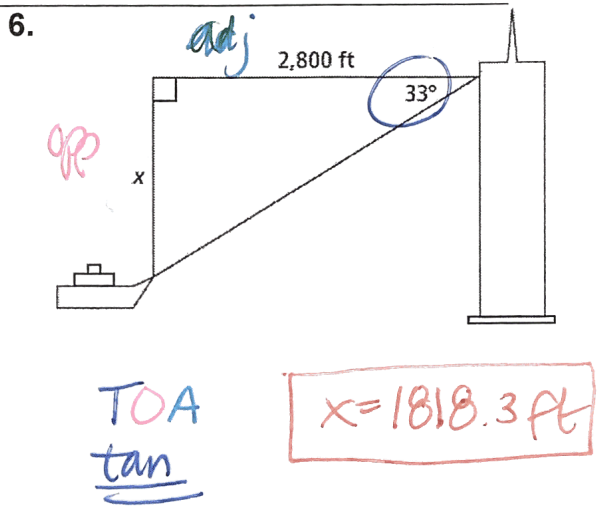
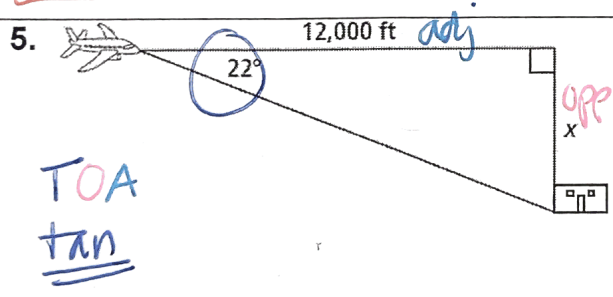
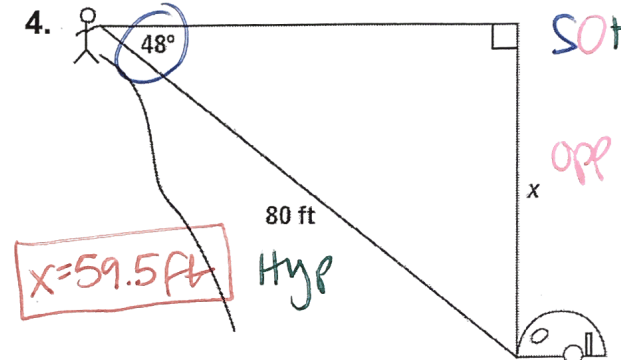
2. TOA
tan



3. SOH = sin



4. SOH = sin



$$\textcircled{1} \tan 40 = \frac{\text{Opp}}{\text{Adj}} = \frac{900}{x}$$

$$x \cdot \tan 40 = \frac{900}{x} \cdot x$$

$$\frac{x \tan 40}{\tan 40} = \frac{900}{\tan 40}$$

$$x = 1072.6 \text{ ft}$$

$$\textcircled{2} \tan 37 = \frac{O}{A} = \frac{x}{1000}$$

$$1000 \cdot \tan 37 = \frac{x}{1000} \cdot 1000$$

$$1000 \tan 37 = x$$

$$753.6 = x$$

ft

$$\textcircled{3} \sin 18 = \frac{O}{H} = \frac{60}{x}$$

$$x \cdot \sin 18 = \frac{60}{x} \cdot x$$

$$\frac{x \sin 18}{\sin 18} = \frac{60}{\sin 18}$$

$$x = \frac{60}{\sin 18}$$

$$x = 194.2 \text{ m}$$

$$\textcircled{4} \sin 48 = \frac{O}{H} = \frac{x}{80}$$

$$80 \cdot \sin 48 = \frac{x}{80} \cdot 80$$

$$80 \sin 48 = x$$

$$59.5 \text{ ft} = x$$

$$\textcircled{5} \tan 22 = \frac{O}{A} = \frac{x}{12,000}$$

$$12,000 \cdot \tan 22 = \frac{x}{12,000} \cdot 12,000$$

$$12,000 \tan 22 = x$$

$$4848.3 \text{ ft} = x$$

$$\textcircled{6} \tan 33 = \frac{O}{A} = \frac{x}{2800}$$

$$2800 \cdot \tan 33 = \frac{x}{2800} \cdot 2800$$

$$2800 \tan 33 = x$$

$$1818.3 \text{ ft} = x$$