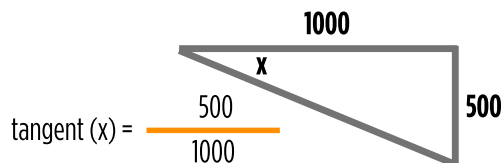


Name: _____

Practicing Right Angle Trigonometry - Answer Key

1.

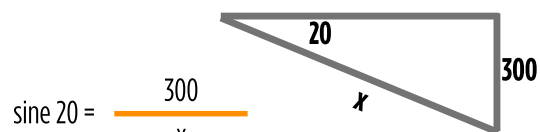


$$\text{tangent } (x) = \frac{500}{1000}$$

$$\text{tangent } (x) = 0.5$$

$$\text{Inverse of tangent} = 26.6 \text{ degrees}$$

2.



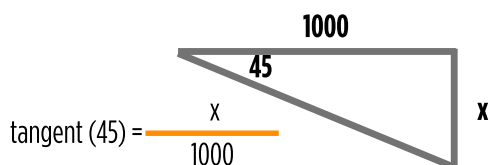
$$\sin 20 = \frac{300}{x}$$

$$x = \frac{300}{\sin 20}$$

$$x = \frac{300}{0.34}$$

$$x = 883 \text{ feet}$$

3.



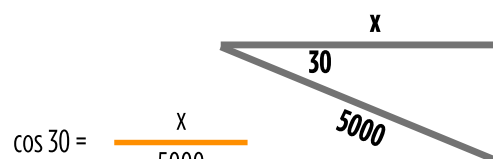
$$\text{tangent } (45) = \frac{x}{1000}$$

$$x = 1000 (\tan 45)$$

$$x = 1000 (1)$$

$$x = 1000$$

4.



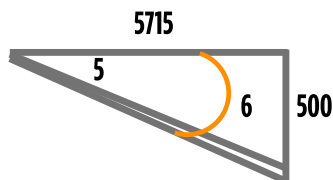
$$\cos 30 = \frac{x}{5000}$$

$$x = 5000 (\cos 30)$$

$$x = 5000 (0.886)$$

$$x = 4,330 \text{ feet}$$

5.



$$\tan 6 = \frac{500}{x}$$

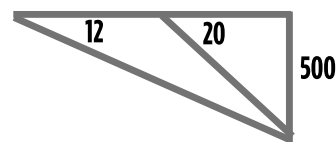
$$x = \frac{500}{\tan 6}$$

$$x = \frac{500}{0.105}$$

$$x = 4761 \text{ feet}$$

$$5715 - 4761 = 954 \text{ feet}$$

6.



Drone 1

$$\tan 20 = \frac{500}{x}$$

$$x = \frac{500}{\tan 20}$$

$$x = \frac{500}{0.364}$$

$$x = 1374 \text{ feet}$$

Drone 2

$$\tan 12 = \frac{500}{y}$$

$$y = \frac{500}{\tan 12}$$

$$y = \frac{500}{.2125}$$

$$y = 2352 \text{ feet}$$

$$2352 - 1374 = 978 \text{ feet apart}$$