

#Jenny



Finally I get this ebook, thanks for all these I can get now!

#Rio



Cool! I'am really happy

#Markus Jensen



I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

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My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

8) Standing in a light house, 145 feet above the shore, I spot a boat at an angle of depression of 11 degrees. How far away is the boat from shore?

**Trigonometry Word Problems**

Step 1: Draw a diagram. Step 2: Extract the right triangle. Step 3: Solve.

**SOLUTIONS**

$$\tan(11^\circ) = \frac{145}{d}$$

$$d = \frac{145}{\tan(11^\circ)} \approx \frac{145}{.194} \approx 747.2 \text{ feet}$$

check for reasonableness: 747 feet is opposite the 79 degree angle and 145 feet is opposite the 11 degree angle. ✓

9) Looking out from a balcony, the angle of elevation to the top of the next building is approximately 22°. And, the angle of depression to the bottom of the building is approximately 29°. If the building is 200 feet away, how tall is it?

**Upper part:**  $\tan(22^\circ) = \frac{x}{200}$   $x = 80.8 \text{ feet}$

**Lower part:**  $\tan(29^\circ) = \frac{y}{200}$   $y = 110.9 \text{ feet}$

**total height: 191.7 feet (approximately)**

10) A hiker approximates an angle of elevation to the top of a hill to be 22 degrees. After walking 700 feet closer, the hiker estimates the angle of elevation increased by 16 degrees. Approximately, how high is the hill?

$\tan(22^\circ) = \frac{h}{x}$

$\tan(22^\circ) = \frac{h}{(700 + x)}$

$(\sin(22^\circ))^2 = (700 + x)\sin(22^\circ)$

$-79124 = 262.818 + .4040x$

$x = 749.58 \text{ (approximately)}$

Then, find h, using x and trig function:

$\tan(22^\circ) = \frac{h}{749.58}$

$h = 585.6 \text{ (approximately)}$

$\tan(22^\circ) = \frac{585.6}{1449.58}$  ✓

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**Trigonometry Practice Problems And Solutions**