

# Today's Learning Goal(s):

By the end of the class, I will be able to:

- a) Use the primary trig ratios to solve real world applications.
- b) Correctly identify an angle of elevation and an angle of depression.

## MCF 3MI 5.1 Applying the Primary Trigonometric Ratios

Date: \_\_\_\_\_

Ex. 1: You will see three types of trig equations. (Solve each to 1 decimal place) .

- a) the variable on the top    b) the variable on the bottom    c) the variable is the angle

$$\tan 55^\circ = \frac{x}{8}$$

$$\sin 35^\circ = \frac{4.3}{y}$$

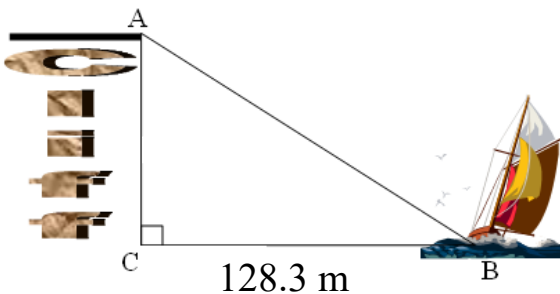
$$\cos Z = \frac{2.9}{5.6}$$

Ex. 2 A sailboat is 128.3 m from a cliff.

The angle of depression from the top of the cliff to the sailboat is  $65^\circ$ .

Write the trigonometric ratio for the height of the cliff.

**Let  $h$  represent the height of the cliff, in m.**



**Solution:**

*NOT*

## Method:

Name the sides based on the indicated angle (sketch first if necessary).

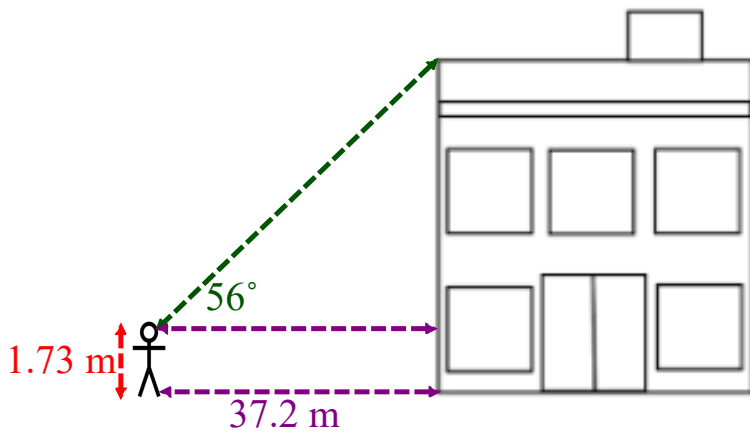
Choose the correct Trig ratio using *SOH, CAH, TOA* (based on the given information from the diagram).

Write the Trig equation, then **ISOLATE** the variable.

Use a calculator to solve the equation.

Round your **final** answer, and give a concluding ( $\therefore$ ) statement (including units).

Ex. 3 Use the diagram to estimate the height of the building, to 2 decimal places.



Let  $h$  represent the height of the building, in m.



$\therefore$  the building's height is \_\_\_\_\_ m.

Today's Homework: **READ** p. 270 "In Summary" **AND**  
pp. 271-273 # 3 – 5, 7 – 11, 14