

Today's Learning Goal(s):

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

- a) Solve real-life problems by using combinations of primary trig ratios.

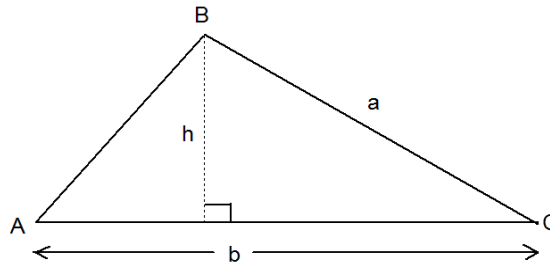
MCF 3MI 5.2 Solving Trigonometry Problems I

Date: _____

Calculating the area of a triangle using Trigonometry.

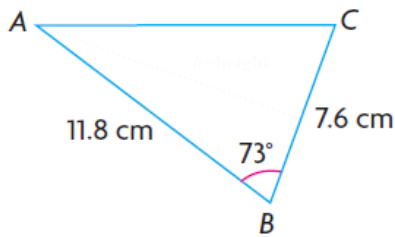
Recall: $A = \left(\frac{1}{2}\right) b \times h$

From the diagram,



Ex. 1: (p. 280 # 1b)

Calculate the area of the triangle to the nearest tenth of a square centimetre.



the area of the triangle is _____ .

Ex. 2: (p. 280 # 3)

Karen and Anna are standing 23 m away from the base of a 23 m high house. Karen's eyes are 1.5 m above ground and Anna's eyes are 1.8 m above ground. Both girls observe the top of the house and measure its angle of elevation. Which girl will measure the greater angle of elevation? Justify your answer.

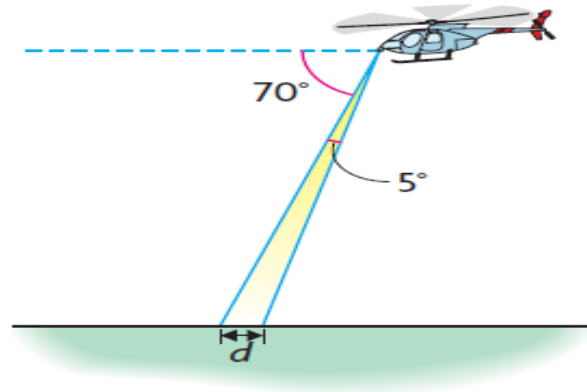
Ex. 3: (p. 281 # 5)

If the angle of elevation to the top of the pyramid of Cheops in Giza, Egypt, is 17.5° , measured 348 m from its base, can you calculate the height of the pyramid accurately? Explain your reasoning.



Ex. 4: (p. 281 # 8)

A searchlight is mounted at the front of a helicopter flying 125 m above ground. The angle of depression of the light beam is 70° . An observer on the ground notices that the beam of light measures 5° . How wide, to the nearest metre, is d , the spot on the ground?



the spot on the ground is _____ wide.