2.6: The Sine Law

Draw a triangle that satisfies the following:
Acute Triangle ABC with <A = 60º, <C = 50º, and side AB is 10 cm. How do we solve this if it doesn't have a right angle triangle?

Can we, using primary trig ratios solve this triangle?

What other information is needed in order to solve this triangle?
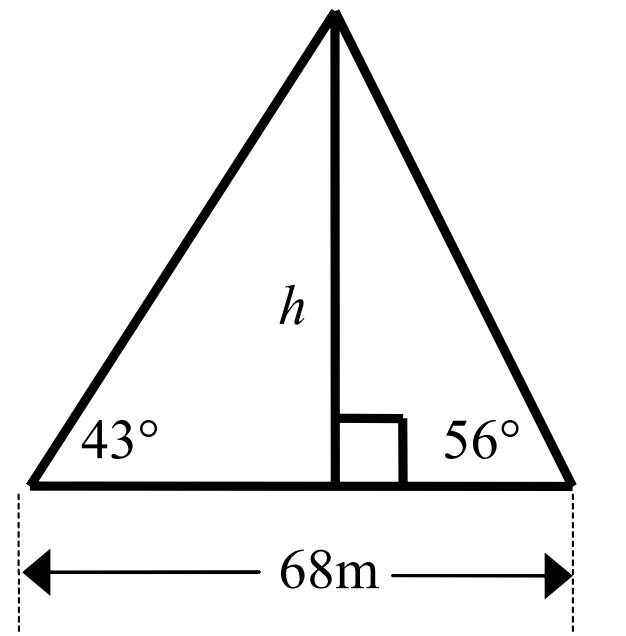
The Sine Law

EXAMPLE #1
In triangle ABC, given that <B = 48º, <C = 25º, and side a is 36 cm. Find the length of c and b correct to 1 decimal place. Include a sketch in your solution.

EXAMPLE #2

Solve for the value of h in the following diagram:

h

43°

56°

68m

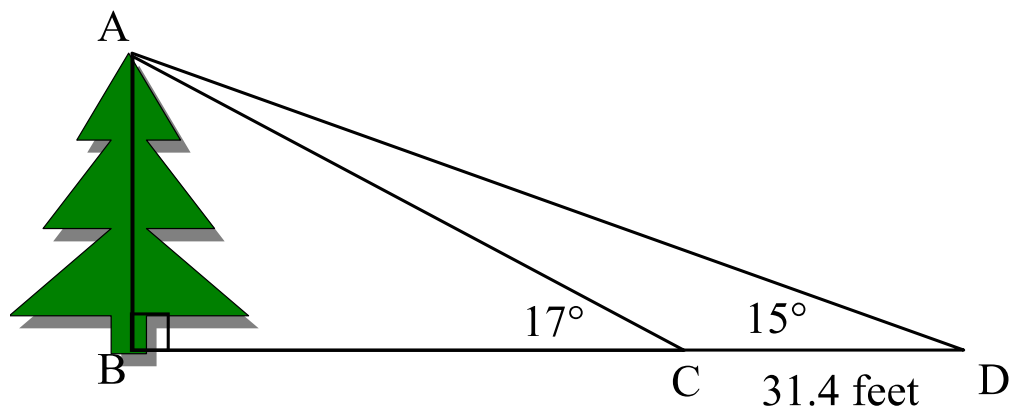# EXAMPLE #3
In triangle ABC, given that <B = 72º, side c = 12 cm and side b = 32 cm, find <C to the nearest degree.

EXAMPLE #4: Find the height of the tree.

A

B   17°   C   15°   D

31.4 feet

EXAMPLE #5: A cable car stops part of the way across an 86 m wide gorge. The cable holding the car makes an angle of depression if 57° at one end ad an angle of depression of 40° at the other end. How long is the cable that holds the car? Round your answer to the nearest metre.