After watching the video, *Law of Sines*, complete the following problems.

1. We wish to determine the height of a wall. If a five-foot tall person paces off 50 feet from the wall, we can measure the angle of inclination to the top of the wall to be 60°. The angle of inclination is the angle the person's head has to tilt from the horizontal to look at the top of the wall. How high is the wall?

Wall

60°

5 Feet

50 Feet
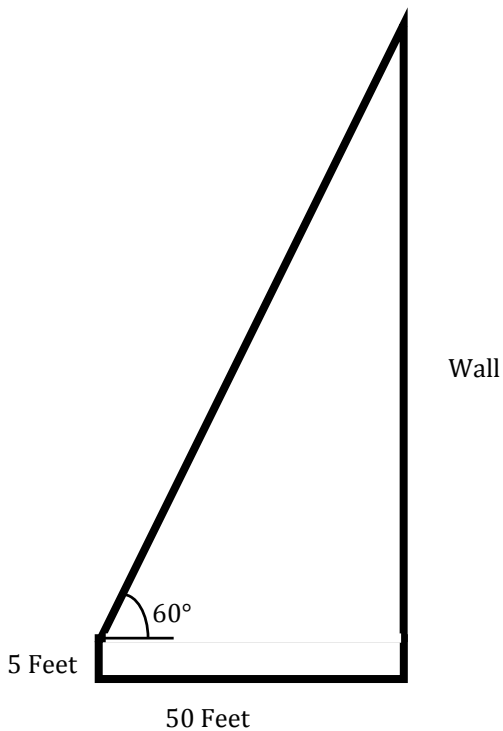
2. Assume a triangle has side lengths a, b, and c, with opposite angles A, B, and C. Draw, as best you can, a triangle with a = 20, B = 80°, and C = 40°. Compute A, b, and c.

B

80°

20

c

40°

C

b

A

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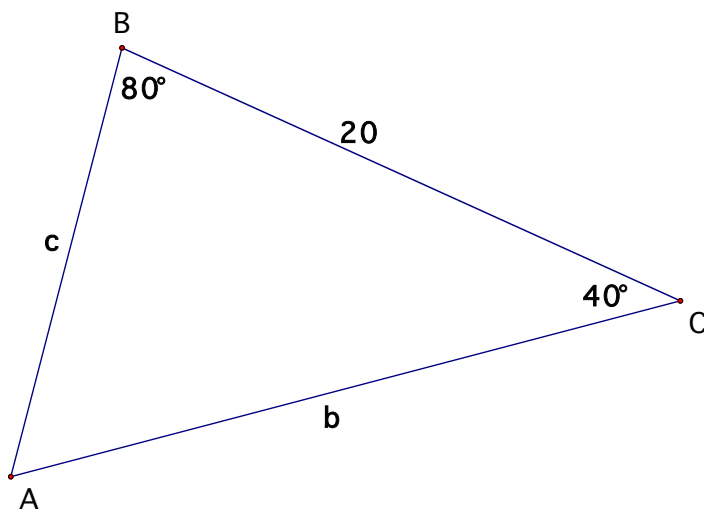
3. A child has a toy snake. He holds one end in each hand and extends his arms to stretch the snake out to its maximum length. If the angle formed by his arms is 20° and if each arm is 2 feet long, how long is the toy snake?

toy snake

2ft

2ft

20°
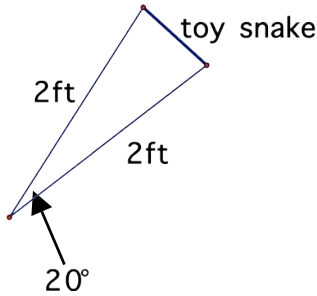
4. Two ladders lean against each other. If the first makes an angle of 70° with the ground, and the second makes an angle of 75° with the ground and they are four feet apart, how tall are the ladders?

C

ladder 1   ladder 2

70°   75°

A   4 ft   B

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