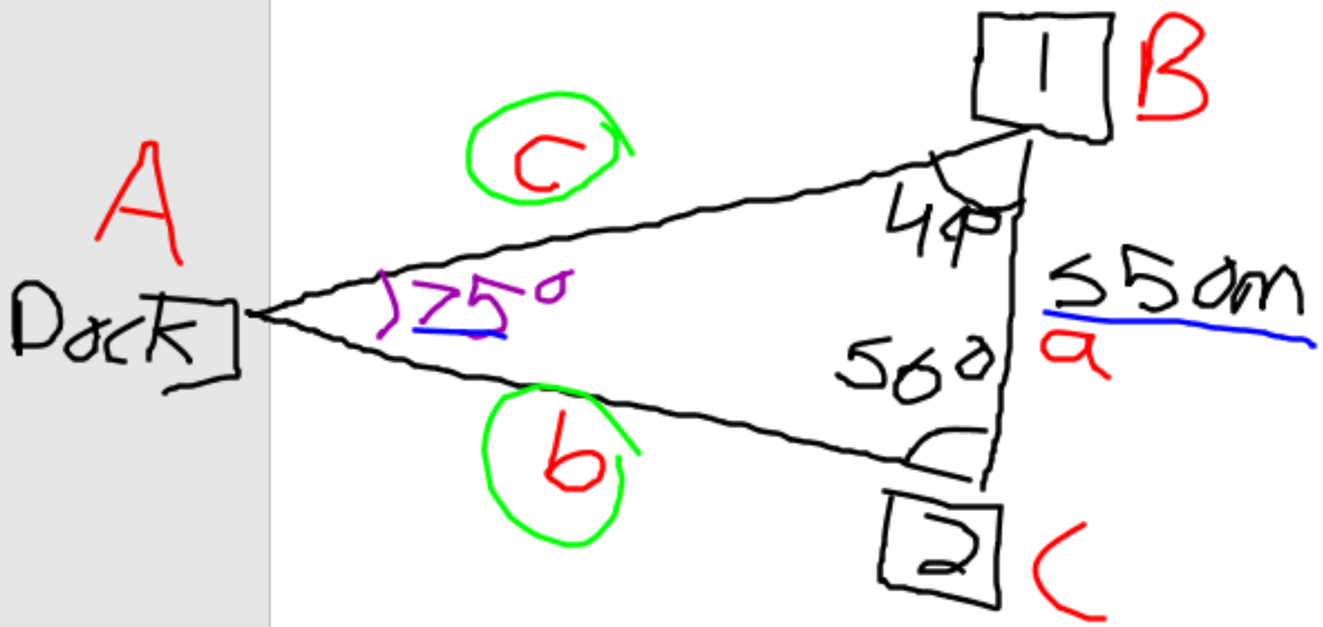
Section 1.5 Make Decisions Using Trigonometry

1. A ferry is used to transport guests from the dock to two hotels across a large lake. The hotels are located 550 m apart. The first hotel is at a 49° angle between the dock and the second hotel. The second hotel is at a 56° angle between the dock and the first hotel. How far is each hotel from the dock?



$\angle A = 180 - 49 - 56$

$\angle A = 75°$

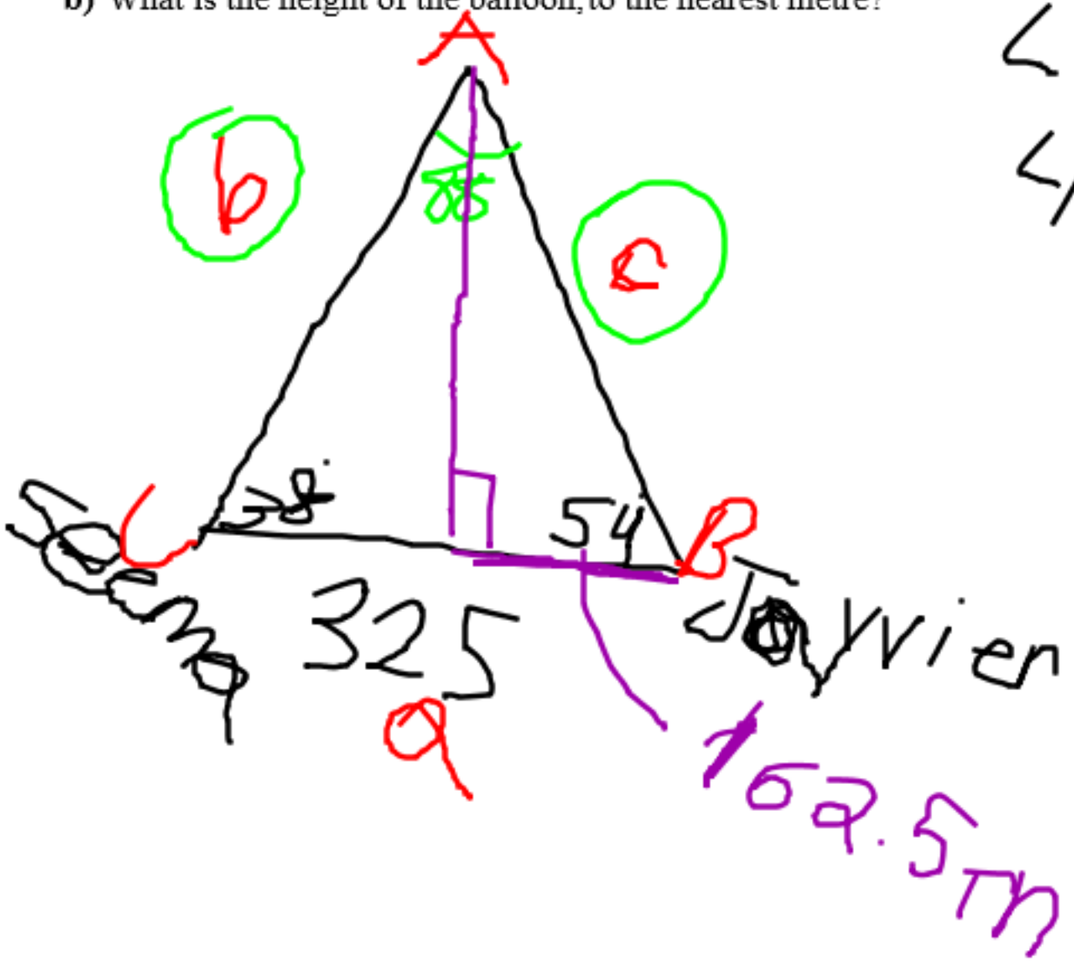
$\frac{a}{\sin A} = \frac{c}{\sin C}$

Then solve for b.

(page 2)

2. Jayveer and Seema are standing 325 m apart, watching a hot air balloon above them. Jayveer measures the angle of elevation to the balloon to be 54°. Seema measures the angle of elevation to the balloon to be 38°.

a) How far is each person from the balloon, to the nearest metre?
b) What is the height of the balloon, to the nearest metre?



$\angle A = 180 - 38 - 54$

$\angle A = 88°$

Part a) Find b and c

1. Choose the best formula to solve each triangle....BLM 4.14.1...

(page 3)

3. From one end of a bridge above a railroad track, the angle of depression to the tracks is 37°. If that point is 112 m from the track and the bridge is 122 m long, how far from the other end of the bridge is the track, to the nearest metre?