**TRIGNOMETRY APPLICATIONS ASSIGNMENT**

1. A tree is 15 m tall.
2. Determine the angle of inclination to the top of the tree, if you stand 15 m from the base.

b) The tree grows at a rate of 2 cm per year; 50 years from now, you come back and stand in the same spot, 15 m from the base. Determine the angle of inclination then.

1. Consider the A-frame cottage below. Using the measurements provided, and your trigonometry knowledge, determine the height of the cottage at the peak. (HINT: Assume everything makes right angles.)



**18’**

**8’**

**4’**

1. Phoebe and Holden are on opposite sides of a tall tree, 125 m apart. The angles of elevation from each to the top of the tree are 47o and 36o. What is the height of the tree?



1. A boat sails from Meaford to Christian Island, to Collingwood, then to Wasaga Beach.
2. What is the total distance the boat sailed?



1. What is the shortest distance from Wasaga Beach to Christian Island?
2. Marie wants to determine the height of an Internet transmission tower. Due to several obstructions, she has to use indirect measurements to determine the tower height. She walks 50 m from the base of the tower, turns 110o, and then walks another 75 m. Then she measures the angle of elevation to the top of the tower to be 25o. Determine the height of the tower.

