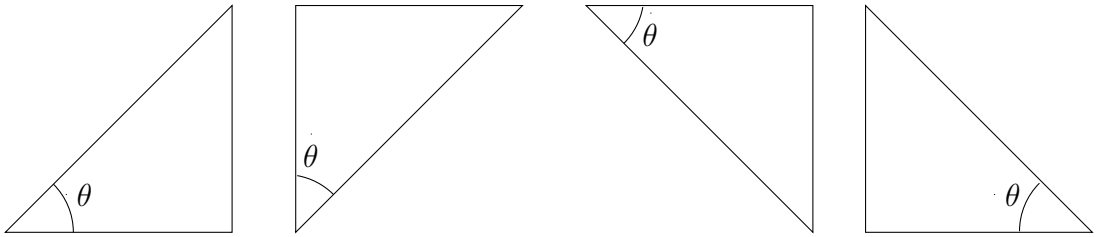
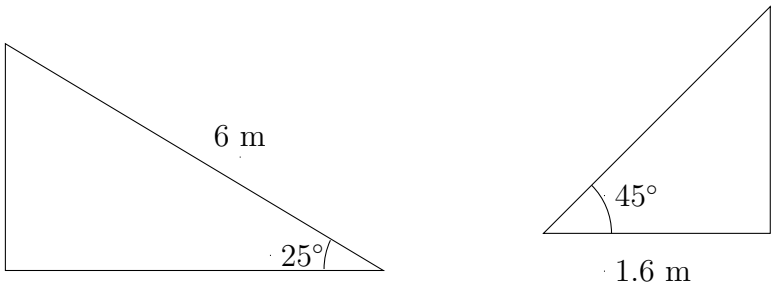
Name:

Assignment 0.03 - Trigonometry Review

1. Identify the opposite, adjacent, and hypotenuse of each of the following triangles:



2. Calculate the length of each side of the following triangles (not drawn to scale):



3. Ivan is walking across a field. He walks 6000m in 40 minutes, at a 35° angle south of west.

   (a) Draw a diagram of the situation.

   (b) How far west is Ivan from where he started?

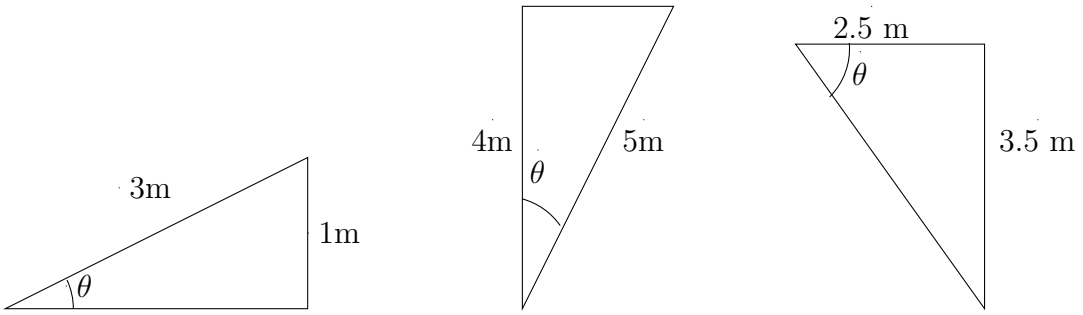
   (c) How far south is Ivan from where he started?

   (d) How fast was Ivan walking?

   (e) How fast was Ivan moving to the west?

   (f) How fast was Ivan moving to the south?

4. Calculate the indicated angle for each triangle:



5. Angel is hiking in the desert, where he walks 2 miles to the east, then 1 miles north.

   (a) Draw a diagram of the situation.

   (b) How far is Angel from where he started?

   (c) Because he has been gone for so long, a search-and-rescue helicopter is dispatched to find Angel. What angle (measured from east) should the helicopter pilot fly at to find him?

6. Hazel is flying in a plane at 350 m/s to the north. The wind is blowing at 120 m/s to the east.

   (a) Draw a diagram of the situation.

   (b) What is Hazel's resultant speed?

   (c) What angle will Hazel's plane go (measured from north)?