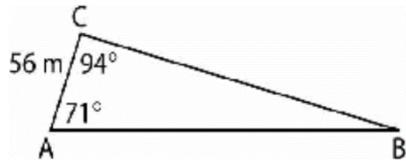
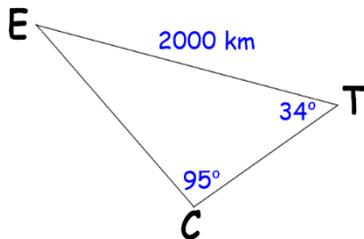


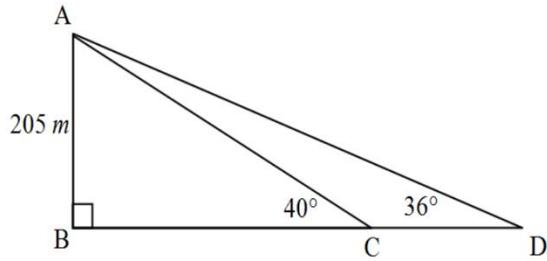
4. To measure the distance from a point A to an inaccessible point B, a surveyor picks out a point C and measures angle A to be 71° . He moves to point C, a distance of 56 m from point A, and measures angle C to be 94° . How far is it from A to B?



5. In an attempt to drive from Edmonton (E) to Toronto (T), I accidentally got on the wrong highway and ended up in Chicago (C) instead. Once I realized my mistake, I drove straight from Chicago to Toronto. How much further did I drive than was necessary?



6. A smokestack, **AB**, is 205m high. From two points C and D on the **same side** of the smokestack's base B, the angles of elevation to the top of the smokestack are 40° and 36° respectively.
Find the distance between C and D.



7. Two roads separate from a village at an angle of 37° . Two cyclists leave the village at the same time. One travels 15 km on one road and the other travels 20 km on the other road.
How far apart are the cyclists?

8. A pilot is flying from Thunder Bay, Ontario to Dryden, Ontario, a distance of approximately 320 km. As the plane leaves Thunder Bay, it flies 20° off-course for exactly 80 km.

a. Draw a diagram to represent the situation.

b. After flying off course, how far is the plane from Dryden?

c. By what angle must the pilot change her course to correct the error?