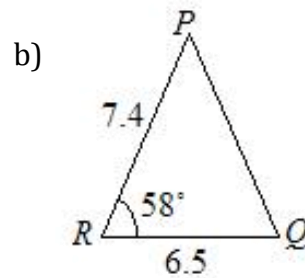**Law of Cosines Practice**
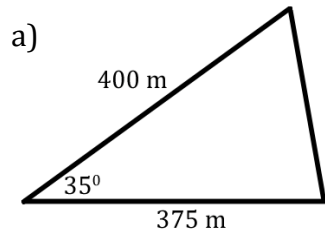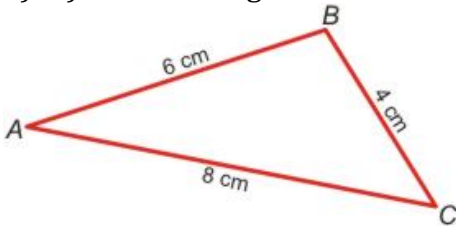
Name:_____ Per:_____

Show all of your work, and circle your final solution.

1) Find the missing side length:

a)

400 m

35⁰

375 m

b)

P

7.4

58°

R

6.5

Q

2) a) Solve for angle C:

B

6 cm

A

4 cm

8 cm

C

b) Solve for angle B

11.6

B   C

7.4

15.2

A
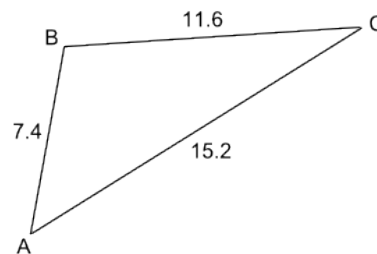
3) SATELLITES: Two radar stations in eastern Oregon are tracking an airplane. The stations are 2.4 miles apart. The straight-line distance between station A and the plane is 7.4 miles. The straight-line distance between station B and the plane is 6.9 miles.
a) Draw a diagram of the situation.
b) Find the angle of elevation from stations A to the plane. Round to 1 decimal.

4) SKATING: During a figure skating routine, Jackie and Peter skate apart with an angle of 15 degrees between them. Jackie skates for 5 meters and Peter skates for 7 meters. How far apart are the skaters?

5)** The figure below is a parallelogram. Find the angle:
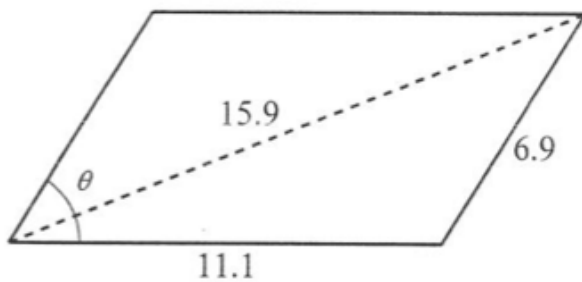
6)*** Challenge problem:

Locating a Fire The bearing from the Pine Knob fire tower to the Colt Station fire tower is N 65° E, and the two towers are 30 kilometers apart. A fire spotted by rangers in each tower has a bearing of N 80° E from Pine Knob and S 70° E from Colt Station. Find the distance of the fire from each tower.