Name: _____

Law of Cosines

1) Two planes leave the airport at approximately the same time. One is flying 425 miles per hour at a bearing of S85E, and the other is flying 530 miles per hour at a bearing of N23E. Draw figures that give a visual representation of the problem and determine the distance between the planes after they have flown for 2 hours.

2) A ship travels 60miles due east, then adjusts its course northward. After traveling 800 miles in that direction, the ship is 139 miles from its point of departure. Describe the bearing from point B to point C
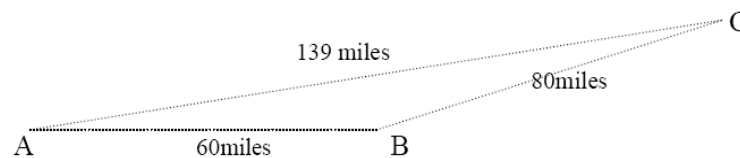
3) An airplane is traveling at a speed of 500 miles per hour with a bearing of N30W at a fixed altitude with a negligible wind velocity. When the airplane reaches a certain point, it encounters a wind with a velocity of 70 miles per hour in the direction N45E. What are the resultant speed and direction of the airplane?

4) Find the area of the triangle whose sides are a = 28, b = 60, c = 51

5) Given the points A(1,2) , B(-2,0) and C(1,-3), find the area of triangle ABC.

6) Find the area of triangle ABC whose perimeter is 18ft with b = 6.23 ft and c = 3.45 ft

7) Given a triangle ABC with a = 10 ft , b = 12 ft and c = 18 ft. Find angle B and the area of the triangle ABC.