



**III. In problems 9 and 10, find the area of the triangle. Round the answer to the nearest unit.**

9)  $\angle C = 36^\circ$ ,  $a = 5$  ft,  $b = 7$  ft.

10)  $a = 7$ m,  $b = 9$ m,  $c = 12$ m

**IV. IV: Word Problems**

11) Two trucks leave a city at the same time and travel along straight highways that differ in direction by  $75^\circ$ . One truck averages 80 miles per hour and the other averages 70 miles per hour.

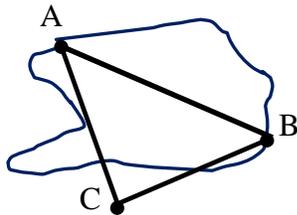
a) How far apart will the trucks be after 30 minutes? **Round to the nearest tenth of a mile.**

b) How far apart will the trucks be after 3 hours? **Round to the nearest tenth of a mile.**

12) The Leaning Tower of Pisa leans at an angle of about  $85^\circ$ . 180ft from the base of the tower, the angle of elevation to the top is  $65^\circ$ . Find the distance to the nearest tenth of a foot, from the base to the top of the tower.

13) A surveyor needs to determine the distance between two points that lie on opposite banks of a river. 500 yards are measured along one bank. The angles from each end of this line segment (AB) to a point on the opposite bank (C) are  $70^\circ$  from point A and  $47^\circ$  from point B. Find the distance between point B and C to the nearest tenth of a yard.

14) Use the figure to find the distance across the lake from A to C, to the nearest yard.  $AB = 150$  yds,  $BC = 175$  yds, and  $m\angle B = 85^\circ$



15) Use the same drawing above (problem 14). If  $AB = 11$  miles,  $BC = 13$  miles, and  $AC = 19$  miles, what is the measure of  $\angle A$ ?

16) A plane leaves airport A and travels 600 miles to airport B on a bearing of  $N45^\circ E$ . The plane later leaves airport B and travels to airport C 450 miles on a bearing of  $S85^\circ E$ . Find the distance from airport A to airport C to the nearest tenth.

1)	7)	11) a)
2)		b)
3)	8)	12)
4)		13)
5)	9)	14)
		15)
6)	10)	16)