

## Practice

**Law of Cosines**

Solve each triangle described below. Round measures of sides and angles to the nearest tenth.

1.  $a = 12, b = 7, C = 80^\circ$
2.  $a = 16, b = 20, C = 54^\circ$
3.  $A = 78.3^\circ, b = 7, c = 11$
4.  $B = 71^\circ, c = 6, a = 11$
5.  $a = 8, b = 6, c = 9$
6.  $a = 16.4, b = 21.1, c = 18.5$
7.  $a = 4, b = 5, c = 8$
8.  $a = 4, b = 3, c = 6$
9.  $A = 23^\circ, b = 10, c = 12$
10.  $C = 35^\circ, b = 24, a = 18$
11. Two motorists start at the same point and travel in two straight courses. The courses diverge by  $95^\circ$ . If one is traveling at 50 mph and the other is traveling at 65 mph, how far apart will they be after 4 hours?
12. In problem 11, when will the motorists be 400 miles apart?