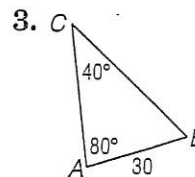
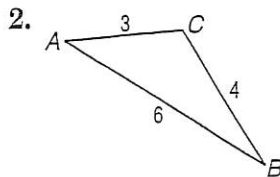
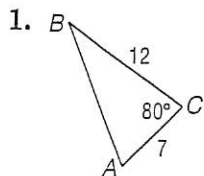


Law of Cosines

Determine whether each triangle should be solved by beginning with the Law of Sines or Law of Cosines. Then solve each triangle. Round measures of sides to the nearest tenth and measures of angles to the nearest degree.



4. $a = 16, b = 20, C = 54^\circ$

5. $B = 71^\circ, c = 6, a = 11$

6. $A = 37^\circ, a = 20, b = 18$

7. $C = 35^\circ, a = 18, b = 24$

8. $a = 8, b = 6, c = 9$

9. $A = 23^\circ, b = 10, c = 12$

10. $a = 4, b = 5, c = 8$

11. $B = 46.6^\circ, C = 112^\circ, b = 13$

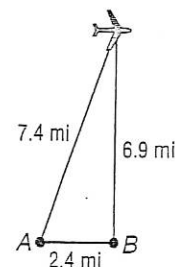
12. $A = 46.3^\circ, a = 35, b = 30$

13. $a = 16.4, b = 21.1, c = 18.5$

14. $C = 43.5^\circ, b = 8, c = 6$

15. $A = 78.3^\circ, b = 7, c = 11$

16. **SATELLITES** Two radar stations 2.4 miles apart are tracking an airplane. 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. What is the angle of elevation from Station A to the plane? Round to the nearest degree.



17. **DRAFTING** Marion is using a computer-aided drafting program to produce a drawing for a client. She begins a triangle by drawing a segment 4.2 inches long from point A to point B. From B, she moves 42° degrees counterclockwise from the segment connecting A and B and draws a second segment that is 6.4 inches long, ending at point C. To the nearest tenth, how long is the segment from C to A?