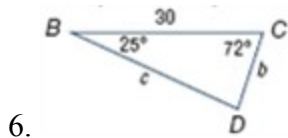
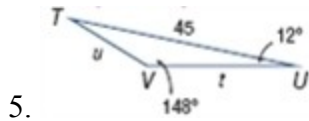
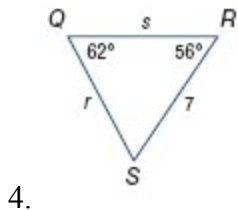
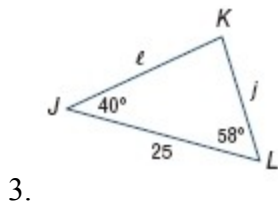
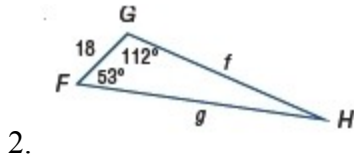
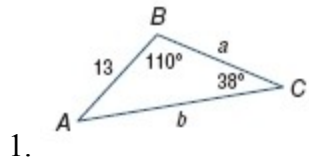


4-7 The Law of Sines and the Law of Cosines

Solve each triangle. Round to the nearest tenth, if necessary.



7. **GOLF** A golfer misses a 12-foot putt by putting 3° off course. The hole now lies at a 129° angle between the ball and its spot before the putt. What distance does the golfer need to putt in order to make the shot?

8. **ARCHITECTURE** An architect's client wants to build a home based on the architect Jon Lautner's Sheats-Goldstein House. The length of the patio will be 60 feet. The left side of the roof will be at a 49° angle of elevation, and the right side will be at an 18° angle of elevation. Determine the lengths of the left and right sides of the roof and the angle at which they will meet.



4-7 The Law of Sines and the Law of Cosines

9. **TRAVEL** For the initial 90 miles of a flight, the pilot heads 8° off course in order to avoid a storm. The pilot then changes direction to head toward the destination for the remainder of the flight, making a 157° angle to the first flight course.
- Determine the total distance of the flight.
 - Determine the distance of a direct flight to the destination