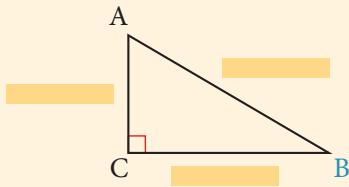


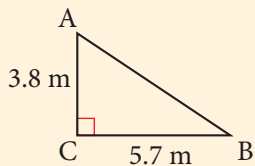
1

Practice Test

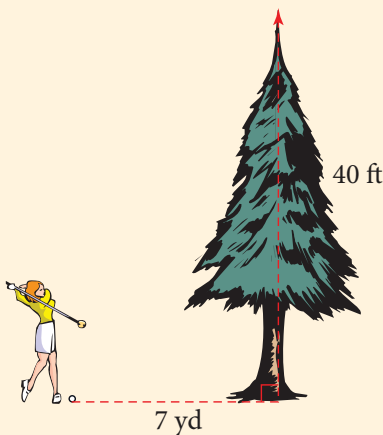
1. Copy and complete the diagram. Name the sides of the right triangle associated with $\angle B$, as adjacent, opposite, or hypotenuse.



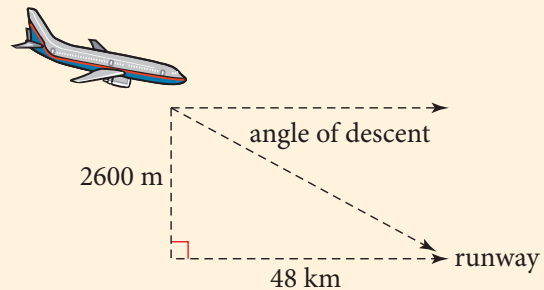
2. Solve $\triangle ABC$.



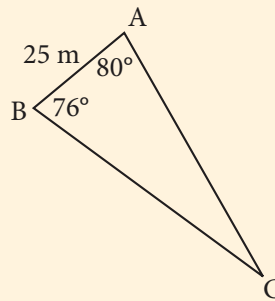
3. A golfer hit her tee shot so that it landed about 7 yd behind a 40-ft tall pine tree as shown. She decided to take her second shot and hoped the ball would make it over the top of the tree. She used her lob wedge and hit the ball, sending it upward at an angle of 60° . Was she able to clear the top of the tree? Show your solution.



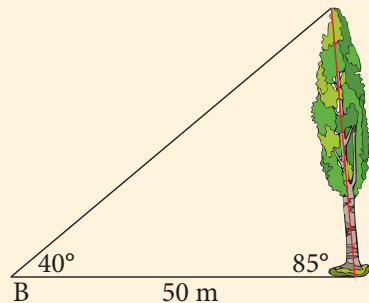
4. An airplane flying at an altitude of 2600 m is approaching an airport runway located 48 km away. Calculate the airplane's angle of descent. Round your answer to the nearest tenth of a degree.



5. Solve $\triangle ABC$.



6. A wind-swept tree grows at angle of 85° . An environmental scientist wants to know the height of the tree. She walks 50 m from the tree and measures an angle of 40° to the top of the tree. How tall is the tree?



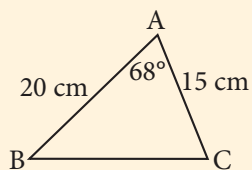
Chapter Problem Wrap-Up

The expedition team set out from the city of Iqaluit on a course 5° east of north and set up camp 15 km from their starting point. The next day, the team set out on a course 25° east of north but encountered a blizzard in the evening. They decided to set up camp until the storm subsided. They estimated that they had travelled at 2 km/h for 8 h. Not knowing their position, they radioed for help.

- Draw a diagram to show the route travelled by the team. Include distances and angle directions.
- Determine the shortest distance and direction a rescue team from Iqaluit would have to travel to reach the team.

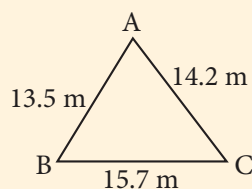


7. Solve $\triangle ABC$.



8. While on a camping trip, Claire hung her food bag up to keep it away from the wildlife. The bag was 6 m above the ground, suspended from the middle of a 6.2-m length of rope between two branches that are at the same height and 4 m apart. What angle did the rope make at the point where the food bag was hung?

9. Determine the measures of $\angle A$, $\angle B$, and $\angle C$.



10. a) Explain why it is possible to solve a right triangle using the sine law if the measures of one side and one angle are given. Is this the best method? Why or why not?
b) Is it possible to solve a right triangle using the cosine law? Explain.