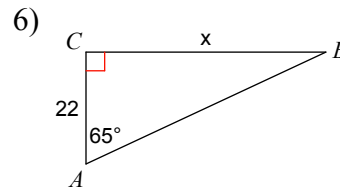
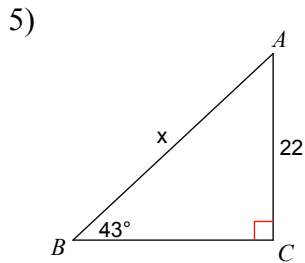
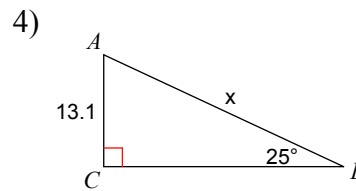
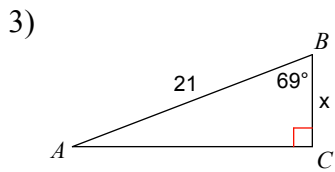
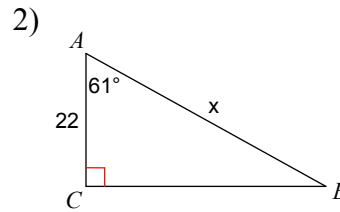
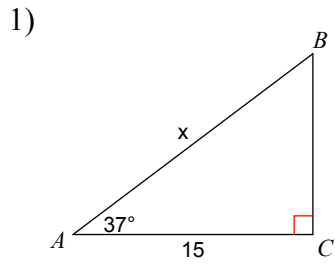
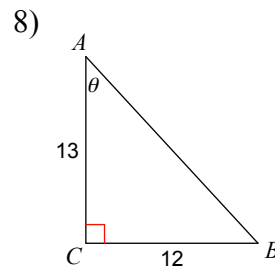
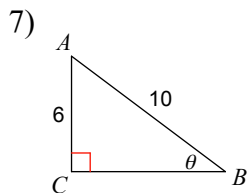


8.2 Missing Sides and Angles

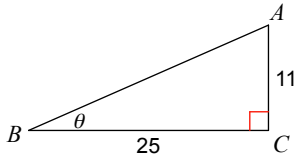
Find the measure of each side indicated. Round to the nearest hundredth.



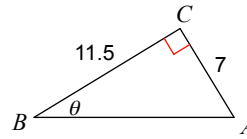
Find the measure of each angle indicated. Round to the nearest hundredth.



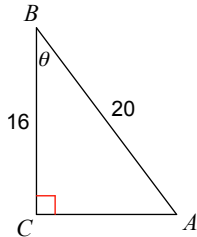
9)



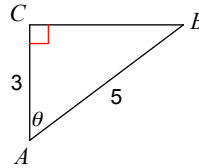
10)



11)



12)



13) A boy flies a kite with a 100-foot-long string. The angle of elevation of the string is 48° . How high is the kite from the ground?

14) A little girl is watching planes take off of the runway from a building's rooftop 40 meters away from the airport. If the height of the building is 400 meters and the girl snaps a photo of a plane at a 24° angle of elevation, what is the altitude, or vertical height, of the plane when the photo is taken?

15) A plane is flying at an altitude of 12,000 m. From the pilot, the angle of depression to the airport tower is 32° . How far is the tower from a point directly beneath the plane?

16) A person is standing 30 meters from a traffic light. If the angle of elevation from the person's feet to the top of the traffic light is 25° , find the height of the traffic light.

17) A great white shark swims 22 feet below sea level. If the shark is 67.7 feet horizontally from the sailboat, what is the angle of depression of the boat to the shark?

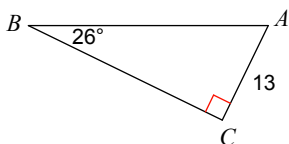
18) A 14-foot ladder is being used to get to the top of a 12-foot-tall wall. At what angle of elevation must the ladder be positioned in order to reach the top of the wall?

19) A mother gazes out a second-floor window at her son playing at the playground. If the mother's eye level is 12 meters off of level ground and the playground is 5 meters from the base of the building, what is the angle of depression from the mother's line of sight to the playground?

20) Tourists marvel at Niagara Falls from two sightseeing boats, A and B. The boats are 100 feet and 150 feet away from the base of the falls, respectively. Given that Niagara Falls is 167 feet high, what is the angle of elevation from both boats to the top of the falls?

Solve each triangle. Round answers to the nearest hundredth.

21)



22)

