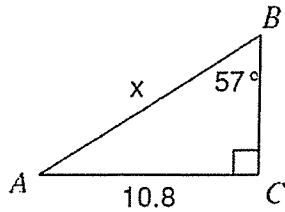
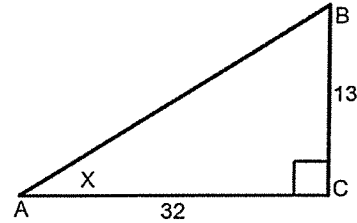


Find the value of x to the nearest hundredth in each problem. SHOW YOUR WORK.

1.

 $x =$

2.

 $x =$

For the remaining problems draw and label a diagram then answer the question. SHOW YOUR WORK.

3. A rocket is shot straight up into the air from the ground. You are lying on the ground 100 feet from where the rocket was launched. You see the rocket with an angle of elevation of 72° . Find the height of the rocket to the nearest whole foot.

4. A 12 foot ladder is placed against the wall of a building. For safety the ladder makes 65° with the ground. How high up the wall can the ladder reach? Round to the nearest hundredth of a foot.

5. You are in a hot air balloon directly above your house. You are at an altitude of 500 ft. If you see your sister on the ground with an angle of depression of 58° . How far from the house is your sister? Round to the nearest whole foot.

6. You attach a 60 foot long rope to a stake in the ground that is also attached to the top of a tall flagpole. If the stake in the ground is 38 feet from the bottom of the flagpole find the angle of elevation the rope makes with the ground. Round to the nearest tenth of a degree.