

Directions: Draw a diagram for each problem, then solve for the missing side or angle. Round all answers to the nearest hundredth.

- 1) Determine the angle of elevation of if a person 5 feet tall casts a shadow of 15 feet.

- 2) A ladder is 7 feet long is leaning against the wall and creates a 62° angle with the ground. How far up the wall does the ladder reach?

- 3) A lifeguard spots a shark from his lifeguard stand, which is 6 feet high. If the lifeguard views the shark at an angle of depression of 5° , how far away is the shark from the stand?

- 4) A person is standing 20m from the base of a building. The person sights the top of the building with an angle of elevation of 58° . Find the height of the building.

- 5) When the sun's angle of elevation is 38° , a building casts a shadow of 45m. How high is the building?

- 6) A plane is flying at an altitude of 1,500 miles. If a person can be viewed from the plane at an angle of depression of 20° , how far from the plane is the person?

- 7) A ladder that is 20 ft long is leaning against the side of a building. If the angle formed between the ladder and the ground is 75° , how far is the bottom of the ladder from the base of the building?