<u>Draw a diagram</u> and solve the problems. Round your answers to two decimal places, as needed.

1. A ladder leans against a brick wall. The foot of the ladder is 6 feet from the wall. The ladder is making a 42° angle with the ground. How long is the ladder?

2. Mary is flying a kite a 50-meter string. The string is making a 50° angle with the ground. How high above the ground is the kite?

3. At a certain time of day, the **angle of elevation** of the sun is 44°. Find the length of a shadow cast by a building 30 meters high.

4. From the top of a lighthouse 210 feet high the **angle of depression** of a boat is 27°find the distance from the boat to the foot of the lighthouse. The lighthouse was built at sea level.

5. Richard is flying a kite. The kite string makes an **angle of elevation** of 57° with the ground. If Richard is standing 100 feet from the point on the ground directly below the kite find the length of the kite string.

6. At a point on the ground 50 feet from the foot of a tree the angle of elevation to the top of the tree is 53°. Find the height of the tree.