

5) An observer in an airplane at a height of 500 meters sees a car at an angle of depression of 31° . If the plane is over a barn, how far is the car from the barn?

6) A ship is heading directly toward a lighthouse whose beacon is 125 feet above sea level. At the first sighting, the angles of elevation from the ship to the light was 7° . A short time later, the angle of elevation was 16° . To the nearest foot, determine and state how far the ship traveled from first sighting to second sighting.

7) Marcos measured the angle of elevation of a tree and found it to be 20° . He walked 100m closer. This time, the angle of elevation was 30° . How tall is the tree? (answer to 1 decimal place)

8) Two buildings are 64.8m apart. From the top of the shorter one, the angle of elevation to the top of the other is 32.5° , while the angle of depression to the base is 48.9° . Find the sum of the building heights to the nearest tenth of a meter.