

Assignment (Mathematics,Ch-9)

Q.1 A man standing on the deck of a ship, which is 10 m above water level, observes the angle of elevation of the top of a hill as 60° and angle of depression of the base of the hill as 30° . Find the distance of the hill from the ship and height of the hill.

Q.2 The angle of elevation of the top of a tower from a point A on the ground is 30° . On moving a distance of 20 meters towards the foot of the tower to a point B, the angle of elevation increases to 60° . Find the height of the tower and distance of the tower from the point A.

Q.3 An aeroplane when flying at a height of 3125 m from the ground passes vertically below another plane at an instant when the angles of elevation of the two planes from the same point on the ground are 30° and 60° respectively. Find the distance between the two planes at that instant.

Q.4 A man on the deck of a ship, 12 m above water level, observes that the angle of elevation of the top of a cliff is 60° and the angle of depression of the base of the cliff is 30° . Find the distance of the cliff from the ship and the height of the cliff.

Q.5 From the top of a tower 100 m high, a man observes two cars on the opposite sides of the tower with angles of depression 30° and 45° respectively. Find the distance between the cars.

Q.6 A man on the top of a vertical tower observes a car moving at a uniform speed coming directly towards it. If it takes 12 minutes for the angle of depression to change from 30° to 45° how soon after this, will the car reach the tower?