**Angles of Elevation and Depression**

(a) Mercy stands away from the foot of a tower. When she looks to the top of the tower, the angle of elevation is . Find the height of the tower.

(b) Rob is a passenger on a boat. The boat is from the foot of a cliff, which is high. Find the angle of elevation of the top of the cliff from the boat.

(c) Talha is on plane, looking down at the airport with an angle of depression of . The height of the plane from the ground is . Find the distance from the plane to the airport.

(d) A pigeon flies down to the ground from the top of a tree at an angle of depression of . The distance the pigeon flies is . How tall is the tree?

(e) Salisbury cathedral spire is tall. Guy stands from the cathedral spire. What is the angle of elevation of the top of the spire from where Guy is standing?

(f) A plane passes overhead at a height of . A short time later, it is at an angle of elevation of . How far away is the plane from its original position?

(g) A prison officer watches prisoners from a guard tower which is tall. He looks due North and can see two prisoners. The angle of depression of each of the prisoners is and . How far apart along the ground are the two prisoners?

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