1. Two ships are sailing in the sea on the two sides of a lighthouse. The angle of elevation of the top of the lighthouse is observed from the ships are 30° and 45° respectively. If the lighthouse is 100 m high, the distance between the two ships is:

A) 173 m B) 200 m C) 273 m D) 300 m

2. A man standing at a point P is watching the top of a tower, which makes an angle of elevation of 30° with the man's eye. The man walks some distance towards the tower to watch its top and the angle of the elevation becomes 60°. What is the distance between the base of the tower and the point P?

A) 43 units B) 8 units C) 12 units D) Data inadequate E) None of these

3. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:

A) 2.3 m B) 4.6 m C) 7.8 m D) 9.2 m

4. An observer 1.6 m tall is 203 away from a tower. The angle of elevation from his eye to the top of the tower is 30°. The height of the tower is:

A) 21.6 m B) 23.2 m C) 24.72 m D) None of these

5. From a point P on a level ground, the angle of elevation of the top tower is 30°. If the tower is 100 m high, the distance of point P from the foot of the tower is:

A) 149 m B) 156 m C) 173 m D) 200 m

6. The angle of elevation of the sun, when the length of the shadow of a tree 3 times the height of the tree, is:

A) 30° B) 45° C) 60° D) 90°