Worksheet 9 – 1

1. Juan needs to know the height of a tree. From a given point on the ground, he finds that the angle of elevation to the top of the tree is 70°. He then moves back 40 ft. From the second point, the angle of elevation to the top of the tree is 25°. Find the height of the tree to the nearest tenth.

2. The angle of elevation to the top of a tree is 28°. After moving 50 ft. closer to the tree, the angle of elevation to the top of the tree is 35°. Find the height of the tree to the nearest tenth.

3. A 6 ft man finds the angle of elevation to the top of a building to be 60°. Standing on a 8 ft ladder from the same spot, he finds the angle of elevation to the top of this building to be 40°. Find the height of the building to the nearest tenth.

4. A 4 ft boy finds the angle of elevation to the top of building to be 40°. Standing on a 10 ft ladder from the same spot, he finds the angle of elevation to the top of this building to be 25°. Find the height of the building to the nearest tenth.

Answers:

1. 22.5 ft
2. 110.5 ft
3. 21.5 ft
4. 26.5 ft