Name: Date:

Trigonometry Worksheet

1. A person stands 50 meters away from the base of a building and looks up at an angle of elevation of 35°. How tall is the building (to the nearest meter), assuming the person's eye level is 1.5 meters above the ground?

2. A 10-foot ladder is leaning against a vertical wall. If the bottom of the ladder is 6 feet from the base of the wall, what angle does the ladder make with the ground? (Round to the nearest degree.)

3. A surveyor stands 40 feet away from a tree and measures the elevation angle to the top as 48°. How tall is the tree? (Round to the nearest tenth of a foot.)

4. Two hikers on opposite sides of a river see a landmark simultaneously. The angle of elevation from one hiker to the landmark is 62°, and from the other, it is 45°. If the landmark is 80 feet high, how wide is the river? (Round to the nearest foot.)

5. An airplane is descending towards a runway. The pilot measures the angle of depression to the runway as 5°, and the altitude of the plane is 2,000 feet. How far is the airplane (along the ground) from the start of the runway? (Round to the nearest foot.)