# Geometry Trig Word Problems Worksheet

Make a drawing for each problem, set up a trig ratio and solve to the nearest tenth. Include the units.

1. A sledding run is 300 yards long with a vertical drop of 27.6 yards. Find the angle of depression of the run.

2. A doctor is using a treadmill to assess the strength of a patient's heart. He sets the 48 inch long treadmill at an incline of 10°, how high is the end of the treadmill raised?

3. Find the angle of elevation of the sun when a 12.5 meter tall telephone pole casts an 18 meter long shadow.

4. A person in a hot air balloon is looking down with an angle of depression of 36° at their car 75 feet away (straight line distance). How high is the balloon?

5. A student wants to know how tall the flagpole at her school is, her eye level is 5.5 feet above the ground and she stands 36 feet from the base of the flagpole. If the angle of elevation is 25°, what is the height of the flagpole?

6. A person whose eyes are 5 feet above the ground is standing on the runway of an airport 100 feet from the control tower. That person observes an air traffic controller at the window of the 132 foot tower. What is the angle of elevation?

7. A golfer is standing at the tee, looking up to the green on a hill. If the tee is 36 yards lower than the green and the angle of elevation from the tee to the hole is 12°, find the distance from the tee to the hole.

8. A ladder leaning against a building makes an angle of 78° with the ground. The foot of the ladder is 5 feet from the building. How long is the ladder?

9. A person is sitting on a 30 foot pier overlooking the ocean. His eye level is 3 feet above the pier. He sees a whale surface in the ocean. If the angle of depression of the whale is 20°, how far is the whale from his eyes?

10. After flying at an altitude of 500 meters, a helicopter starts to descend when its ground distance from the landing pad is 11 kilometers. What is the angle of depression for this part of the flight?