

Angle of depression

Math 2

1. An observer in a 55-foot tall lighthouse spots a ship in distress at an angle of depression of 9.5° . How far is the ship from shore?
2. A hot air balloon is tethered to the ground by a 75-foot cable. As the balloon is inflated, it begins to rise. Due to the wind, the angle of depression from the balloon to the ground is 52° when the cable is pulled tight. How high above the ground is the balloon at this instant before the cable is released?
3. A fire is spotted by a ranger in a fire tower 30 feet above the ground. The angle of depression from the ranger to the fire is 18° . How far is the fire from the base of the tower?
4. You are standing on a platform getting ready to swing from a rope attached to a tree in order to drop into the Little River. Your friend is waiting in the river below. She is across from your position, 25 feet away from the riverbank. You spot her at an angle of depression of 56° . Approximately how far will you drop before you splash into the river below?
5. Otto is standing with his skateboard at the top of a hill. At the bottom of the hill is a sharp turn. The sign at the top of the hill states that grade of the hill is 40%. What is the angle of depression to the bottom of the hill?
6. Your fishing boat started to come loose from the dock. You grabbed the line before it got too far. Your dock is 40 inches above the water level. The line you are holding onto the end of is 10 yards long. What is the angle of depression to your boat at this instant?