Name: _____

CC Geometry

Trigonometry Applications Homework

1) A 40-foot ladder leaning against a wall reaches a spot on the wall 34 feet from the ground. What is the angle that the top of the ladder makes with the wall to the nearest degree?

2) A support wire attached to the top of a telephone pole reaches a stake in the ground 32 feet from the foot of the pole. If the wire makes an angle of 50° with the ground, find the length of the support wire to the nearest foot.

3) A girl flying a kite lets out 250 feet of string that makes an angle of 35° with the ground. To the nearest foot, how high above the ground is the kite?

4) The top of a ladder leaning against a building reaches a point on the building that is 29 feet above the ground. If the base of the ladder is 7 feet from the building, what is the measure of the angle that the ladder makes with the level ground to the nearest degree?

5) The base of a ladder leaning against a wall is 7.5 feet from the wall. The ladder makes an angle of 67° with the level ground. How high on the wall (to the nearest tenth of a foot) does the ladder reach?

6) An airplane rises at an angle of 12° with the ground. What is the distance it has flown (to the nearest ten feet) when it has covered a horizontal distance of 1,700 feet?

1) 32°

2) 50 ft

3) 143 ft

4) 76°

5) 17.7 feet

6) 1,740 feet