Solving Trig Word Problems

1. A 12 foot ladder was placed against a wall. If the angle formed by the ladder and the ground was 60˚, how far was the base of the ladder from the wall?

2. Movers use a ramp to move furniture on a truck. If the bed of the truck us 6 feet above the ground and the angle at the end of the ramp 10 30˚, how long is the ramp?

3. A wire is attached to the top of a 40 foot telephone pole to a stake in the ground. If the angle formed by ground and the wire is 45˚, what is the length of the wire?

4. The ascent of a rollercoaster to the top of the first hill measures 60˚. If the top is 80 feet from the beginning of the ascent, what is the height of the rollercoaster at the top of the fist hill?

5. To meet required safety standards, a contractor must place his ladder 6 feet from the base of the building making an angle of 60˚, how high will the ladder be on the building?

6. A plane left town A and flew 60 miles east to town B. It left town B and flew 100 miles north to town C. From there, the plane will fly a direct route back to town A, Find the angle the plane must turn.

7. A road is constructed so that it will ride 105 feet for every 1000 feet of horizontal distance. Find the angle the road will rise and the length of the road.