Spiral Review AFM   week of 12.5   SHOW ALL WORK (including diagram)

1. Joe is holding his kite string 3 feet above the ground. The distance between his hand and a point directly under the kite is 95 feet. If the angle of elevation to the kite is 50°, find the height of his kite to the nearest foot.

2. A surveyor 100 meters from the base of a cliff measures the angle of elevation to the top of the cliff as 77°. What is the height of the cliff?

3. At a point 180 feet from the base of the building, the angle of elevation to the fifth floor is 52° and to the tenth floor is 83°. How much higher is the tenth floor than the fifth floor?

4. A 32 foot ladder is placed against a wall at 62° with the ground. How far away from the wall is the base of the ladder?

5. A person at the top of a cliff 125 feet tall sees a boat in the water below. His sighting of the boat is at an angle of depression of 24°. How far is the boat from the base of the cliff?

6. A 47 inch goal post is leaning against a fence. If the post is 22 inches away from the base of the fence, what angle is formed between the ground and the post?

7. A plane takes off at an elevation of 33°. What will the ground distance be of the plane be when it reaches an altitude of 32,050 feet?

8. The ski slope known as Devil's Hill has an elevation from the ground of 45°. If the distance down the slope is 1500 meters, what is the altitude of the hill?

9. A wire supporting a radio tower is positioned 145 feet up the tower. It forms a 45° angle with the ground. About how long is the wire?

10. Lauren is at the top of a 55 meter lookout tower. From an angle of depression of 37°, she spots Evan walking toward her. How far is Evan from the base of the tower?