Math 2
Unit 5 Day 6 CW

Draw your own picture and then use SOHCAHTOA to solve for the missing information!!!

1. From a point 80 m from the base of a tower, the angle of elevation to the top of the tower is 28°. How tall is the tower?

2. A ladder that is 20 ft. long is leaning against the side of a building. If the angle formed between the ladder and the ground is 75°, how far is the bottom of the ladder from the base of the building?

3. When the sun is 62° above the horizon, a building casts a shadow 18 m long. How tall is the building?

4. A kite is flying at an angle of elevation of about 55°. Ignoring the sag in the string, find the height of the kite if 85 m of string have been let out.

5. A wire is attached to the top of the tower and to a point on the ground that is 35 m from the base of the tower. If the wire makes a 65° angle with the ground, how long is the wire?

6. The angle of depression from the top of a tower to a boulder on the ground is 38°. If the tower is 25 m high, how far from the base of the tower is the boulder?

7. An observer at the top of a building sees a car on the road below. The angle of depression to the car is 28°. If the car is about 50 m from the building when it is seen, how tall is the building?

8. A kite is flying at an angle of elevation of 43°. Find the height of the kite if 37 ft. of the string have been let out.

9. A ladder leans against a wall at 28°. The bottom of the ladder is 12 ft. from the wall. Find the length of the ladder.

10. A man in a hot air balloon 20,000 ft. in the air sees a tree below at an angle of depression of 11°. How far is the man from the tree?

11. When the sun casts a shadow at 65° above the horizon from a building the shadow is 25 ft. long. How tall is the building?

12. A 100 ft. building casts a 300 ft. shadow from the sun. What is the angle of depression?