

## Answer the questions - find your answer on the Teddy Bear - color according to your answers.

**1.** A man flies a kite with a 100 feet string. The angle of elevation of the string is 52°. How high off the ground is the kite? **(GREEN)** 

height = \_\_\_\_\_ feet

2. At a point on the ground 50 feet from the foot of a tree, the angle of elevation to the top of the tree is 53°. Find the height of the tree rounded up to two decimal points. (RED)

height = \_\_\_\_\_ feet

 Tom and Sam are on the opposite sides of a tower of 160 meters height. They measure the angle of elevation of the top of the tower as 40° and 55° respectively. Find the distance between Tom and Sam. (PINK)

distance = \_\_\_\_\_ meters

4. A man on the deck of a ship is 13 feet above water level. He observes that the angle of elevation of the top of a cliff is 40° and the angle of depression of the base is 20°. Find the distance of the cliff from the ship and the height of the cliff if the base of the cliff is at sea level. Round your answer to the nearest hundredth. (LIGHT BROWN)

distance = \_\_\_\_\_ feet

5. A ladder on a fire truck has its base 8 feet. above the ground. The maximum length of the ladder is 100 ft. If the ladder's greatest angle of elevation possible is 70°, what is the highest above the ground that it can reach? Round your answer to the nearest hundredth. (ORANGE)

Maximum Height = \_\_\_\_\_ feet

6. From the top of a spire of height 50 feet, the angles of depression of two cars on a straight road at the same level as that of the base of the spire and on the same side of it are 25° and 40°. Calculate the distance between the two cars. Round your answer to the nearest hundredth. (RED)

distance = \_\_\_\_\_ feet

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7. A rescue team 1000 feet away from the base of a vertical cliff measures the angle of elevation to the top of the cliff to be 70°. A climber is stranded on a ledge. The angle of elevation from the rescue team to the ledge is 55°. How far is the stranded climber from the top of the cliff? Round your answer to the nearest hundredth. (ORANGE)

distance = \_\_\_\_\_ feet

8. A golfer is standing at the tee, looking up to the green on a hill. If the tee is 36 yards lower than the green and the angle of elevation from the tee to the hole is 12°, find the distance from the tee to the hole. Round your answer to the nearest hundredth. (RED)

distance = \_\_\_\_\_ yards

**9.** A 14 foot ladder is used to scale a 13 foot wall. At what angle of elevation must the ladder be situated in order to reach the top of the wall? **(LIGHT BROWN)** 

Angle = \_\_\_\_\_

**10.** From a plane flying due east at 265 m above sea level, the angles of depression of two ships sailing due east measure 35° and 25°. How far apart are the ships? **(YELLOW)** 

distance = \_\_\_\_\_





## Answers: 1. 78.8

76.8
66.35
302.7
42.97
101.97
18.64
1555.73
7.65
68.21°
44.65

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