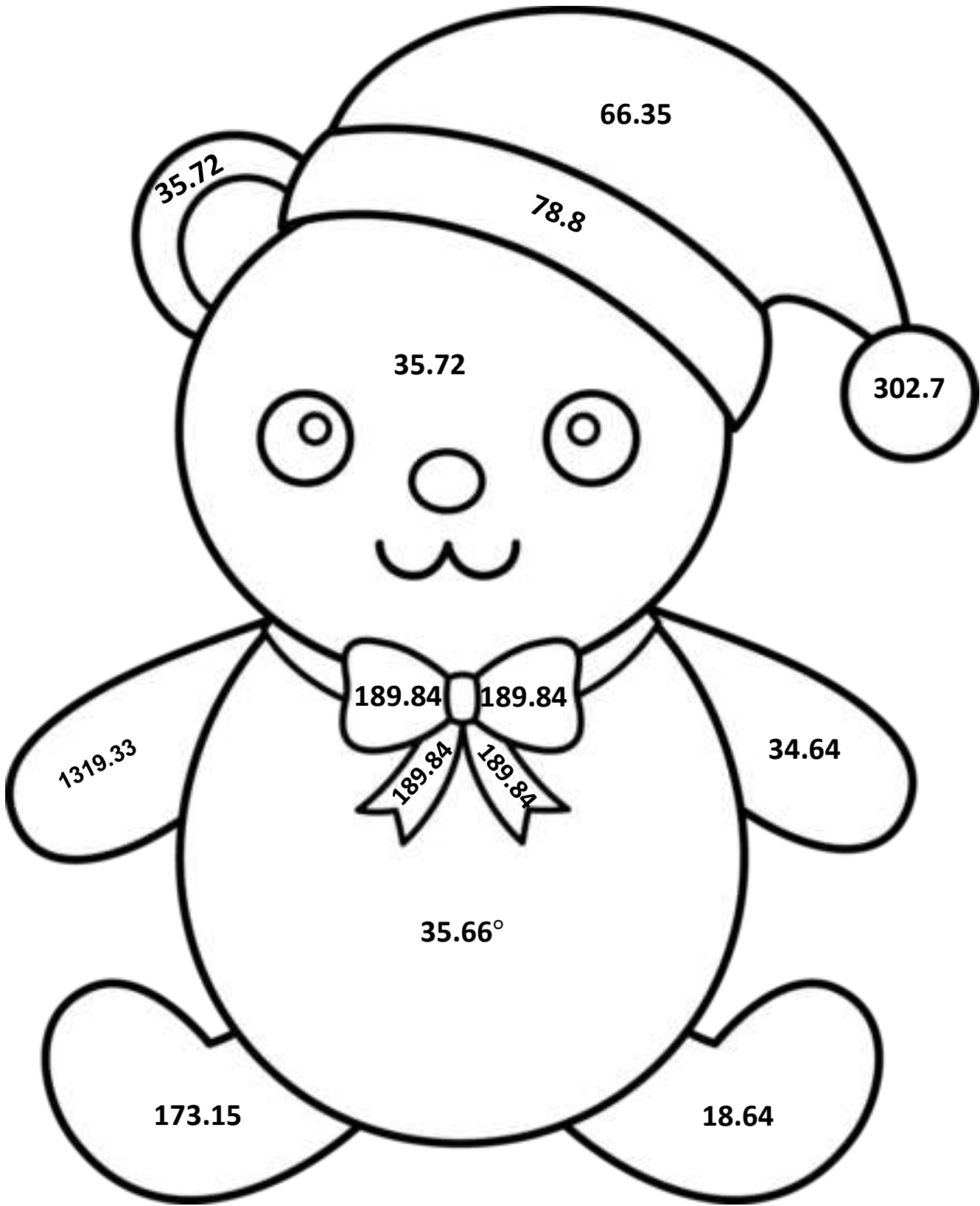


Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

# COLOR BY CODES ANGLES OF ELEVATION AND DEPRESSION



**Answer the questions. Color the “Teddy Bear” according to your answers.**

1. A man flies a kite with a 100 feet string. The angle of elevation of the string is  $52^\circ$ . How high off the ground is the kite? Round your answer to the nearest hundredth. **(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  $53^\circ$ . Find the height of the tree rounded up to the nearest hundredth. **(RED)**

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

3. 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  $40^\circ$  and  $55^\circ$  respectively. Find the distance between Tom and Sam. Round your answer to the nearest hundredth. **(PINK)**

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

4. A man on the deck of a ship is 13 feet above water level. He observes that the angle of depression of the base of a cliff is  $20^\circ$ . Find the distance of the cliff from the ship. Round your answer to the nearest hundredth. **(LIGHT BROWN)**

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

5. A kite in the air has its string tied to the ground. If the length of the string is 40 meters and its inclination to the horizontal is  $60^\circ$ , find the height of the kite above the ground when the string is taut. **(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  $25^\circ$  and  $40^\circ$ . Calculate the distance between the two cars. Round your answer to the nearest hundredth. **(RED)**

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

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  $70^\circ$ . A climber is stranded on a ledge. The angle of elevation from the rescue team to the ledge is  $55^\circ$ . 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  $12^\circ$ , find the distance from the tee to the hole. Round your answer to the nearest hundredth. **(RED)**

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

9. A ladder 8 meters long rests against a vertical wall so that the distance between the bottom of the ladder and the wall is 6.5 meters. Find the angle that the ladder makes with the ground. **(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  $35^\circ$  and  $25^\circ$ . How far apart are the ships? Round your answer to the nearest hundredth. **(YELLOW)**

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