Name _____ Date _____

1) A ladder is standing on horizontal ground and rests against a vertical wall. The ladder is 5.5 m long and its foot is 1 m from the wall. Calculate how far up the wall the ladder will reach to the nearest tenth.

2) Town A is 65 km due north of town B. Town C is 44 km due east of town B. Calculate the distance from town A to town C. Round you answer to the nearest hundredth of a km.

3) The bottom of a ladder must be placed 3 feet from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

4) A soccer field is a rectangle 80 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across and back. How far did the players run? Round to the nearest whole meter.

5) How far from the base of the house do you need to place a 15-foot ladder so that it exactly reaches the top of a 12-foot tall wall?

6) What is the length of the diagonal of a 10 cm by 15 cm rectangle?

7) The diagonal of a rectangle is 25 in. The width is 15 inches. What is the length?

8) The area of a square is 81 square centimeters. Find the length of a side. Find the length of the diagonal

9) A baseball diamond is a square that is 90 feet on each side. What is the distance from home to second base?

10) Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the front door?

11) Two telephone poles are 90 feet apart and the poles are each 60 feet tall. What is the distance from the base of one pole to the top of the other pole?

12) If the legs of an isosceles right triangle are 5 inches long, approximate the length of the hypotenuse to the nearest whole number.

13) Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the nearest tenth of a mile, they must travel to return to their starting point?

14) To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 34 meters south and 41 meters east. To the nearest meter, how many meters would be saved if it were possible to walk through the pond?

15) In the Old West, settlers often fashioned tents out of a piece of cloth thrown over tent poles and then secured to the ground with stakes forming an isosceles triangle. How long would the cloth have to be so that the opening of the tent was 4 meters high and 3 meters wide?

16) How far from the base of the house do you need to place a 15-foot ladder so that it exactly reaches the top of a 12-foot tall wall?

17) Tanya runs diagonally across a rectangular field that has a length of 40 yards and a width of 30 yards. What is the length of the diagonal, in yards, that Tanya runs?

18) A suitcase measures 24 inches long and 18 inches high. What is the diagonal length of the suitcase to the nearest tenth of a foot?

19) A ramp was constructed to load a truck. If the ramp is 9 feet long and the horizontal distance from the bottom of the ramp to the truck is 7 feet, what is the height from the ground to the top of the ramp?

20) How long is the wire from the top of a 21 foot pole to a point on the ground 5 feet from the foot of the pole?

21) An umbrella that is 2.5 feet long, is to be packed diagonally in a suitcase. If the case is 1.75 feet wide, how long must the suitcase be?