1. What is the SI unit for measuring volume? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. What is the SI unit for measuring mass? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. What is the SI unit for measuring length? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. How many milligrams are there in 1gram? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. If 1 marble has a mass of 1 gram, then

100 marbles would have a mass of 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1000 marbles would have a mass of 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Which prefix means one hundredth? \_\_\_\_\_\_\_\_\_\_\_\_ one thousandth? \_\_\_\_\_\_\_\_\_\_\_

What is the value of each prefix below?

7. Kilo (K) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Hecto (H) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Deca (da) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. deci (d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. centi (c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. milli (m) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Which direction do you move the decimal to convert from centigrams (cg) to the basic unit for mass, grams(g)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. Which direction do you move the decimal to convert from Kiloliters (kL) to centiliters (cL)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. Which direction do you move the decimal to convert from millimeters (mm) to basic unit for length, meters (m)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Convert each quantity below.** *Scratch Paper Area*

16) 50.2 cm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ m

17) 89 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Km

18) 2.16 L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mL

19) 0.000827 Kg = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mg

**Tell what each tool below is used to measure.**

 20. 21. 22.

  

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name an object that you would measure with each tool above.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23. What is the difference between Qualitative data and Quantitative data?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tell whether the data below is an example of Qualitative (QL) or Quantitative (QN) data.**

24. The light is yellow. \_\_\_\_\_\_\_\_\_\_

25. The length of the desk is 1.2 meters. \_\_\_\_\_\_\_\_\_\_\_\_\_

26. The ice is cold. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tell whether the hypothesis is Testable (T) or Not testable (N).**

\_\_\_\_\_\_ 27. Motorcycles get more miles per gallon of gas than trucks do.

\_\_\_\_\_\_ 28. GE light bulbs last longer than generic light bulbs.

\_\_\_\_\_\_ 29. Blueberry muffins taste the best.

30. What mass does the triple beam balance measure to the nearest tenth (0.1) g?

****

\_\_\_\_\_\_\_\_\_\_g

31. What volume does the graduated cylinder measure?

` \_\_\_\_\_\_\_\_\_\_\_ ml



32.What length does the ruler measure the paperclip to the nearest tenth (0.1) cm?

 \_\_\_\_\_\_\_\_\_\_\_cm

 What length does the ruler measure the paperclip to the nearest mm?

 \_\_\_\_\_\_\_\_\_\_\_ mm

33. Below is a hypothesis for an experiment. What is the *dependent* variable and the *independent* variable for this experiment?

*Hypothesis: The* GE light bulbs last longer than generic light bulbs*.*

Independent Variable (IV) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable (DV) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**A scientist wants to know if the paper towels from home are more absorbent than the paper towels from work. What is each step of the scientific method of this experiment?**

34. Make a guess that the paper towels from home are more absorbent. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

35. Design an experiment to use both types of paper towels to soak up water.\_\_\_\_\_\_\_\_\_\_

36. Measure the volume of water each type of paper towel held. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

37. From the data, decide which paper towel was more absorbent. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

38. Compare the results to their hypothesis to see if they were right. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39. The \_\_\_\_\_\_\_\_\_\_\_\_\_ of the line below would best be measured in which ***unit***? \_\_\_\_\_\_\_

 **\_\_\_\_\_**

40. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the drink below would best be measured in which ***unit***? \_\_\_\_\_



41. The \_\_\_\_\_\_\_\_\_\_\_ of a marble would best be measured in which ***unit***? \_\_\_\_\_\_\_\_



***Convert these using your metric conversion chart.***

1. 756 m=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Km
2. .000235 Kg=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mg
3. 2.45 L=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mL
4. 755.2 cm=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_m
5. 987 Dg=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_dg
6. .0265 HL=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_dm
7. 59 m=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mm

***Use dimensional analysis convert numbers 8-15.(Circle your answer and use the correct unit)***

1. 5.9 Gallons to Liters (1 gal = 3.79 L)
2. 33 inches to centimeters (2.54 cm = 1 in)
3. 9.2 hours to minutes (1 hr = 60 min)
4. 4 pounds to kilograms (1 Kg =2.2 lbs)
5. 55 minutes to seconds (1 min. = 60 sec)
6. 2.3 miles to feet (1 mile = 5,280 ft)
7. 5.5 miles to yards (1 mile = 1760 yds)
8. 3.6 hours to seconds (1 hr = 60 min; 1 min = 60 sec)