NAME _____

Measurement
Quiz 1
"Metric Conversions"

1.) List the basic metric unit of measure for each of the following:

LENGTH: _____ MASS (WEIGHT): _____ CAPACITY (VOLUME): _____

2.) The best choice among the given metric units to describe the distance between two cities would be:

a) meters b) centimeters c) kilometers

3.) The best choice among the given metric units to describe the mass (weight) of an average adult would be:

a) grams b) milligrams c) kilograms

Convert each of the following metric measurements. ***(Do not round your answers.)***

4.) 365 kg = ? g

5.) 42 cm = ? m

6.) 350 ml = ? liters

7.) 5 m = ? mm

8.) 900 m = ? km

9.) 4.25 cm = ? mm

NAME _____

Measurement
Quiz 2
"English Conversions"

1.) Tim wants to convert 20 lbs into ounces. He will use the conversion: **16 oz = 1 lb**.
Decide which part of the conversion factor belongs in position **A**.

$$\frac{20 \text{ lbs}}{1} \times \frac{A}{B} =$$ Answer: _____ (write either **16 oz** or **1 lb**)

2.) Lisa wants to convert 870 grams into ounces. She will use the conversion factor:
1 oz = 28.3 grams. Decide which part of the conversion factor belongs in position **B**.

$$\frac{870 \text{ grams}}{1} \times \frac{A}{B} =$$ Answer: _____ (write either **1 oz** or **28.3 grams**)

3.) For practice, Jim wants to convert 2.5 days into seconds. His basic setup is shown below. Decide the correct measurements for positions **A** and **B**.

$$\frac{2.5 \text{ days}}{1} \times \frac{24 \text{ hrs}}{\text{A}} \times \frac{60 \text{ min}}{1 \text{ hr}} \times \frac{B}{1 \text{ min}} =$$

Answer: _____ (Position A)

Answer: _____ (Position B)

For problems #4 - 7 convert the given measurement to the indicated units of measure.

4.) 440 yds = ? miles *(nearest hundredth)*

5.) 4.5 lbs = ? ounces *(whole number)*

6.) 2 quarts = ? cups *(whole number)*

7.) 3 bushels = ? quarts *(whole number)*

NAME _____

Measurement
Quiz 3
"Basic Measurement"

The following questions reference items found at Southwest Tech in the ASC. If you are doing this course off-campus you will need to measure the Length, Mass or Weight, and Volume in both the English and Metric systems. You probably have the tools you need at home to make the measurements: a ruler or tape measure for length, a kitchen or bathroom scale for weight, and kitchen measuring cups for volume. Find some items and make your measurements. If you can't locate some of these measuring tools, the next best thing is to look at various products that are labeled in both English and Metric Measures.

1.) Use one of the available clear plastic rulers to measure the length of **Line X** in inches. This line is drawn on a card found at the lab table. Ask for help if you cannot locate this card. Your answer should be in *fractional form*. (Such as 2 1/4, 5 3/8, 10 1/16, etc. instead of decimal form.)

Answer: _____ inches

2.) Use a clear plastic ruler to measure the length of **Line Y** in millimeters. This line is found on the same card as Line X.

Answer: _____ millimeters *(whole number answer)*

3.) Use the 3.5 meter/12 ft Stanley tape measure to determine the **depth** (*front to back*)of the black file cabinet in feet and inches. (Write your answer in the style of the following examples: 4 ft 2 1/2 inches, 5 ft 7 inches, 7 ft 5 3/16 inches.)

Answer: _____ ft _____inches

4.) Use the Stanley tape measure to determine the **width** of the black file cabinet in millimeters.

Answer: _____ millimeters

5.) Use the pan balance located on the lab table to determine the **mass** of the clear plastic Allen Communications Mug in grams.

Answer: _____ grams

6.) Determine the **capacity** in milliliters of the clear plastic square-based pyramid located on the lab table. Ask your instructor if you are not sure which plastic shape this is.

Answer: _____ milliliters

NAME _____

Measurement

Quiz 4

"English-metric Conversions, Multidimensional Conversions, Pharmacology"

1.) A *meter* is very similar in length to:

a) a foot
b) an inch
c) a yard

2.) A *liter* is similar in volume (capacity) to a:

a) fluid ounce
b) gallon
c) quart

Convert each of the following measurements to the indicated unit of measure.

3.) 5 lbs = ? kg *(nearest tenth)*

4.) 7 liters = ? qts *(nearest tenth)*

5.) 21 miles = ? km *(nearest tenth)*

Convert the multidimensional measurements to the indicated units of measure

6.) 100 km/hr = ? miles/hr *(nearest tenth)*

7.) $0.39/liter = ? $/gallon *(nearest penny)*

8.) $4/lb = ? $/oz *(nearest penny)*

9.) 40 mi/hr = ? ft/sec *(nearest tenth)*

10.) 5 square feet = ? square inches *(whole number)*

NAME _____

Solve the pharmacology problems below

11.) A doctor orders 0.5 grams of medication. The label on the bottle reads 125 mg/tablet. How many tablets will you give?

12.) A solution contains 3 grams of medication in 100 ml of solution. The solution is diluted to 1.5 liters. The diluted solution is to be administered in 7.5 hours.

a.) What is the concentration of the diluted solution in mg/ml?

b.) How would you program a pump to achieve the desired flow rate?

c.) How would you set an IV (with a 15 gtts/ml drip factor) to achieve the desired flow rate?

d.) How many minutes will it take to deliver 500 ml of the solution?

e.) How many mg of drug will the patient receive when they have been given 1 liter of solution?