NAME _____

Measurement
Quiz 1
"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 - 10 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)*

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

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

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

NAME _____

Measurement
Quiz 2
"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

10.) 2.65 hectares = ? square meters

NAME _____

Measurement

Quiz 3

"Tolerance & English-metric Conversions"

1.) Given a tolerance of 2.125"±0.001" determine the upper and lower limits.

Answer: _____ upper limit Answer: _____ lower limit

2.) You are to inspect a shipment of steel bars. Each bar has a diameter tolerance of 0.775"± 0.0025". What is the ***smallest*** diameter a steel bar can be and still be considered within the designated tolerance?

Answer: _____

3.) A parts manual says that a valve spring should test at 90 lbs ± 10% in order to considered OK. If you test a valve spring and get a reading of 82 lbs, is the spring within the recommended tolerance?

Answer: _____

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

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

5.) 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.

6.) 5 lbs = ? kg *(nearest tenth)*

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

8.) 21 miles = ? km *(nearest tenth)*

9.) 100 km/hr = ? miles/hr *(nearest tenth)*

10.) $0.39/liter = ? $/gallon *(nearest penny)*

NAME _____

Measurement
Quiz 4
"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