

A-Day: due Mon. Aug. 21 (Assigned 8/17)
B-Day: due Tues., Aug.22 (Assigned 8/18)

Measuring 3

Mr. Murray's Regular Physics

*Reminders: Have you turned in your Lab Safety Contract and Class Rules?
Have your brought a pair of closed-toed shoes to class to use during labs?*

1. Which of the following is bigger (circle it):

- A. centi- or mega-
- B. Milli- or micro-
- C. Milli- or centi-
- D. Kilo- or mega-
- E. Kilo- or centi-
- F. Milli- or mega-

In scientific notation $2,001 = 2.001 \times 10^3$, but $2,000 = 2 \times 10^3$. (Notice the difference.)

2. Express the following numbers in scientific notation:

- A. $578 =$ _____
- B. $0.00458 =$ _____
- C. $45,001 =$ _____
- D. $45,000 =$ _____
- E. $0.0000401 =$ _____
- F. $0.00004 =$ _____

3. If 16 ounces = 1 pound.

A) Give TWO conversion factors from the above equation.

B) Convert 35.2 ounces to pounds (using a conversion factor)

C) If 2.2 pounds = 1 kilogram, convert what you found in part B) to kilograms (you will have found how many kg is 35.2 oz).

4. {Using the same process as above (using conversion factors)} If there $0.22 \text{ lb} = 1 \text{ Newton}$, the how many Newtons is 45 pounds?

5. (Use the Notes: "How to Solve Word Problems" for the following.)

Object A has 6 kg of mass and 125 kgm/s of momentum. Find Object A's velocity.

Variables:

Equation:

Solution: \rightarrow

6. Object B also has 6 kg of mass, but 46 kgm/s of momentum. Find Object B's velocity. (Do it as in #5.)

7. Now, using what you learned from Q 5 and 6:

- A) Which object had more mass?
- B) Which object had more momentum?
- C) Which object had more velocity?
- D) Does momentum increase or decrease with velocity?

8. From the Bellwork:

- A) In any ecosystem are there more herbivores or carnivores?
- B) Are there more producers or consumers?
- C) On the biomass pyramid label the following:
plants; herbivore; carnivores; carnivore of carnivores.

