Name: Period:

Estimation Problems

You can use the back of this paper for scratch work. Since every person has a different height, weight, breathing pattern and volume, you should each have your own sets of data.

1. Height
    a. Estimate your height in feet and inches:
    b. Convert this height into inches:
    c. Roughly convert (estimate) your height in inches into cm's:
    d. Convert your height into meters:

2. Breathing
    a. Estimate how many seconds it takes for each breath (an approximate second is "one Mississippi")
    b. How many breaths per minute?
    c. How many breaths per hour?
    d. How many breaths per day?
    e. How many breaths per year?

3. Weight
    a. Estimate your weight in kg (one kg is a little over 2 lbs):
    b. Convert your weight into grams:
    c. Convert your weight into micrograms:

4. Your lab table
    a. Estimate how many cm^2's there are on the top of your lab table. (A cm^2 is about the size of a fingerprint of your pinky tip.)
    b. Measure the length and width of your lab table in cm's:
    c. Calculate the area of your table in cm^2:
    d. Calculate the percent error between a & c (% error = $\frac{\text{difference between a \& c}}{\text{c}} \text{ x } 100$)

5. Volume (assume you are made completely of water)
    a. Estimate and convert your weight into kilograms:
    b. What is the volume of your body in cm^3? ($1cm^3$ of water = 1 gram)
    c. How many soda bottles would you need to pour yourself into?

6. Hurricane Irene dropped a thickness of 24 cm of water over all of Long Island. How many liters covered Long Island? Remember, these are *estimates*.

7. How many frames of film are shown on the screen during Iron Man 2.

8. Petrol (gasoline) in England is 5.09 EUR for a liter. Approximately, how much is that in dollars per gallon? (1 EUR = $1.4 US)