- 1) If you didn't get your safety sheet signed and returned? Do you have a calculator?
- 2) Write the following numbers in scientific notation.
  - A. 12,756 km (diameter of the earth) =
  - B. 0.082 =
  - C. 702,000,000 =
- 3) Write out these numbers in standard notation.
  - A.  $5.902 \times 10^{-4} =$
  - B.  $3 \times 10^8$  m/s (the speed of light) =
  - C.  $9.11 \times 10^{-31}$  kg (the mass of an electron) =
- 4) Someone writes  $18.3 \times 10^4$ . Correct them.
- 5) How many significant figures do each of the following have? A.  $3.95 \times 10^{-5} =$ \_\_\_\_\_ sig. figs. B.  $9.4056 \times 10^{-24} =$ \_\_\_\_\_ sig. figs.
  - C. 12,000,000 = \_\_\_\_\_ sig. figs.
- 6) Which is more precise? A beaker or a graduated cylinder? Why?





- 8) What is recalibration?
- 9) Why is it important that scientific instruments are able to be recalibrated?
- 10) A. Measure the length of the gray object in mm. (Be sure to estimate between the marks.)
  - B. Give the length in cm.
  - C. Give the length in meters.
- 11) How many meters in a megameter?
- 12) How many centimeters in a meter?
- 13) Which is heavier a pound or a kilogram?
- 14) Which is longer a meter or a yard?
- 15) A. Which was hotter: the wool blanket or the metal?B. Which felt colder?
  - C. Why?



16) What did the wool blanket/metal and the black cylinder/soup can teach you?

- 17) Convert 435 centimeters to meters.
- 18) Convert 15 µm (micrometers) to centimeters.

19) Convert 4,500 meters to kilometers.

20) (Remembering that the standard units for speed is m/s.) An object moves 154 cm in 4 seconds. Calculate its speed.

Using the notes on conversions.

21) Using the equalities at the right, write two conversion factors for feet and miles.

22) What's wrong with this conversion?  $\frac{16 \text{ m}}{1 \text{ sec}} \left(\frac{1 \text{ m}}{3.3 \text{ ft}}\right) =$ 

23) Given 3 m/sec, convert to meters per minute. (You MUST show the steps from the notes.)

24) Try this one: Convert 20 days to minutes.

3.3 ft = 1 m 5280 ft = 1 mi 12 in = 1 ft I assume you know about seconds, mins, etc