

### Metric # 3

1. The earth is approximately 25,000 miles in circumference (at the equator). If you circumnavigated the earth in a balloon along the equator how many kilometers will you have traveled?
2. A light wave travels  $3.0 \times 10^8$  meters in 1 second.
  - a) How many dekameters does the wave travel in 1 second?
  - b) How many millimeters does it travel in 1 second?
3. How many deciliters (dL or dl) are there in 87.26 daL?
4. An automobile travels at a rate of 68.3 kilometers/hour. What is the speed of the car in hm/sec?
5. The mass of an electron is  $9.11 \times 10^{-28}$  grams. What is the mass of the electron in nanograms (ng)?
6. The density of any object can be determined by dividing the mass of the object by the volume of the object. For gold, the density is 19.34 gm/ml. What is the density of gold in units of mm/dl?
7. If a gold bar has a mass of 38.68 kg, what is the volume of the gold bar? Information given in problem # 6 can be used in this problem