Name _____ Block _____ Date _____

Units of Measurement

PART A – SI UNITS

For each of the following commonly used measurements, indicate its symbol. Use the symbols to complete the following sentences with the most appropriate unit. Units may be used more than once or not at all.

_____ milliliter	_____ milligram	_____ liter	_____ centimeter
_____ kilogram	_____ millimeter	_____ kilometer	_____ gram
_____ meter	_____ millisecond	_____ microgram	_____ second

1. Colas may be purchased in two or three _____ bottles.
2. The mass of a bowling ball is 7.25 _____.
3. The length of the common housefly is about 1 _____.
4. The mass of a paperclip is about 1 _____.
5. One teaspoon of cough syrup has a volume of 5 _____.
6. Stand with your arms raised out to your side. The distance from your nose to your outstretched fingers is about 1 _____.
7. The body mass of a flea is about 0.5 _____.
8. On a statistical basis, smoking a single cigarette lowers your life expectancy by 642,000 _____, or 10.7 minutes.

PART B – DENSITY

1. Calculate the density of a substance with a mass of 35.0 g and a volume of 25.0 cm^3.

2. A small gold nugget has volume of 0.87 cm^3. What is its mass if the density of gold is 19.3 g/cm^3?

3. What volume is occupied by 35.2 g of carbon tetrachloride if its density is 1.60 g/mL?

Scientific Notation

1-1 In order to learn how to use exponential numbers, complete the following problems by writing them either in exponential form or regular form:

1. 193,682 =
2. 538 =
3. 4,444,441 =
4. $1.98634 \times 10^{5} =$
5. $1.98634 \times 10^{8} =$

1-2 If the decimal is moved to the right, the exponent is negative. Therefore, .0159 can also be written as 1.59×10^{-2}. Try these:

1. .056982 =
2. .11341 =
3. $9.28 \times 10^{-8} =$
4. $1411 \times 10^{-3} =$
5. .000005112 =

Algebraic Simplification

2-4 Solve the following problems:

1. $\frac{8}{x} = \frac{4}{3}$
2. $\frac{12x}{3} = 24$
3. $\frac{2x + 5}{30} = \frac{4 - 2x}{12}$