Biology 4605/7220 Quiz #1b NAME_____
13 September 2005

1. Name a quantity of interest to you that has dimensions of M/T. In the spaces below provide a complete five-part definition of the quantity (name, symbol, procedural statement, numbers, units).

NAME	SYMBOL	TYPICAL VALUES	SCALE (typical units)

Procedural statement (you may have to invent this)

$sum(X) = \sum_{i=1}^{n} X_i = X_1 + X_2 + \cdots + X_n$ n is number of observations (it has no units)

$mean(X) = \bar{X} = \frac{1}{n}\sum^{n} X$ $variance(X) = s^2 = \frac{1}{n-1}\sum\left((X - \bar{X})\right)^2$

coefficient of dispersion $cd(X) = \frac{\text{var}iance(X)}{mean(X)}$

2. Substitute the symbol for your quantity within the parentheses in the following expressions, and fill in the blanks.

sum( ) has units of _____

mean( ) has units of _____

cd( ) has units of _____

3a. The median is defined as a value such that half the observations are above and half are below. Report the mean and median values of the following quantity (don't forget units).

E = [65 5 5 10 15] Joules *mean*(E) = _____

median(E) = _____

3b. State which is greater (mean or median) _____

3c. Explain why.