Biology 4605/7220   Quiz #1   NAME_____
11 September 2007

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

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

$mode(X)$ = most commonly occurring value in a set of data.

1a. Report the mean and modal values of the following quantity (don't forget units).

P = [65   5   5   10   15] Pascals $mean$(M) = ____20 Pascals____

                                                       $mode$(M) = ___5 Pascals____

1b. What units does the variance of Pressure have?   ___Pascals^2____

2. Name a quantity of interest to you that has dimensions of concentration M/V (= M L^{-3}).
In the spaces below provide a complete five-part definition of the quantity (name, symbol,
procedural statement, numbers, units).

		TYPICAL	
NAME	SYMBOL	VALUES	SCALE (typical units)

Procedural statement (you may have to invent this)

Provide sufficient detail about the mass measurement and volume measurement
to permit another person to carry out comparable measurements. "Measure
mass" is not enough.
Describe how mass was measured

3. Give an example of a quantity on an ordinal type of scale.

		TYPICAL	
NAME	SYMBOL	VALUES	SCALE
		1st	Not applicable
		2nd	

Procedural statement (Make sure it is clear, <u>from the procedure</u>, why the variable is on an
ordinal type of scale)

Must be reproducible, as described above. Must include details on how ranking
was done.