Lab for Sections 15.3

Use good notation and show appropriate work. State your solutions to problems in complete sentences. Name _____

- 1. Let $A = \{2, 5, 8, 9\}$, $B = \{7, 10, 13, 14\}$ and $C = \{6, 15, 24, 27\}$. Note: Each element of *B* is 5 greater than the corresponding value in *A* and each element of *C* is 3 times the corresponding element in *A*.
 - (a) Calculate the range, mean, standard deviation, and coefficient of variation for each of the above sets.

- (b) Compare the results for data sets *B* and *C* to the results associated with data set *A*. Use your visual comparisons to suggest answers to the following questions. Write complete sentences.
 - (i) Suppose a constant is added to each element of a data set in order to form a new data set. What effect does addition of a constant to each term have on the range? mean? standard deviation? coefficient of variation?

(ii) Suppose each member of a data set is multiplied by a positive constant to form a new data set. Describe the effect on the range, on the mean, on the standard deviation and on the coefficient of variation.

x	frequency		
1	2		
3	3		
4	10		
5	4		
9	1		

2. Calculate the mean, standard deviation, and coefficient of variation for the following grouped data. First complete the table.