

I. Find the range, variance, and standard deviation of each set of data to the nearest tenth.

Given Set of Data	Range	Variance	Std. Dev.
1.) {32, 41, 35, 35, 46, 42}			
2.) {13, 62, 77, 24, 38, 19, 88}			
3.) {89, 99, 42, 16, 42, 71, 16}			
4.) {450, 400, 625, 225, 300, 750, 650, 625, 300, 450}			
5.) {17, 23, 65, 94, 33, 33, 33, 8, 57, 75, 44, 12, 11, 68, 39}			
6.) {7.2, 3.1, 3.8, 9.5, 8.3, 8.4, 11.2, 7.2}			
7.) {1.5, 2.5, 3.5, 4.5, 4.5, 5.5, 6.5, 7.5}			
8.) {48, 36, 40, 29, 45, 51, 38, 47, 39, 37}			

II. Complete each problem below. You may find the mean, variance, and standard deviation using the calculator steps on your notes.

- 9.) Data set “A” has five elements: $A = \{82, 87, 92, 94, 80\}$. Create a data set “B” such that each element of set B is 1 *less* than those in set A. Now, create a data set “C” such that each element of set C is 2 *more* than set A.
What is the mean, median, range, variance, and standard deviation of sets A, B, and C?
Explain your observations about these values.
- 10.) The height of a group of students is 66 inches with a standard deviation of 4 inches. If the heights had been measured in centimeters instead, what would be the mean and standard deviation?
(Hint: 1 inch = 2.54 centimeters.)
- 11.) The physics class took two tests. On the first test, the mean score was 72 with a standard deviation of 5. On the second test, the mean score was 80 with a standard deviation of 6. Cindy made an 82 on the first test and an 87 on the second. On which test did she do better relative to the rest of the class?
- 12.) A teacher gave a test: {80, 82, 85, 95, 87, 63, 68, 93, 92, 90, 88, 82, 70, 64, 75}
- What percent of the scores fell within one standard deviation from the mean?
 - What percent of the scores fell within two standard deviations from the mean?
 - What percent of the scores fell within three standard deviations from the mean?
 - The teacher wanted to add a flat curve to all the test scores by adding 3 points, would the mean or standard deviation change?