Math 114 Name_____

2.7 Measures of the Spread of Data

In this class, students responded to "How many hours of sleep did you get last night?"
Here are the numbers given in an ordered list:

1, 2, 3, 5, 5, 5, 5, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 8, 8, 8, 9

Use the list to complete the table below:

Number of hours of sleep last night	Frequency
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Mean $\overline{X} = \frac{x_1 + x_2 + x_3 + \cdots + x_n}{n}$	
Sample Standard Deviation $s = \sqrt{\frac{\Sigma(X - \overline{X})^2}{n-1}}$	
Population Standard Deviation $\sigma = \sqrt{\frac{\Sigma(X - \mu)^2}{N}}$	

Place a point for each of the numbers above the number line below. Mark and label the position of the mean and draw boxes, using different colors around the 1st, 2nd, and 3rd (population) standard deviation from the mean.