

HW on investigating standard deviation

Given the following 2 Data Sets:

Data Set A): 5, 9, 12, 6

Data Set B): 6, 8, 7, 7

1. For each data set find the mean and the standard deviation.
2. Which data set has the smaller standard deviation? Why do you think that is?
3. Predict if the standard deviation will be higher, lower, or the same if every data point in the data sets increases by 1.
4. Add one to all the numbers in data set A (6, 10, 13, 7), and find the new standard deviation.
5. Was your answer to question number 3 correct? Being the standard deviation is the measure of spread from the MEAN, can you explain your observation?
6. Predict if the standard deviation will be higher, lower, or the same if every data point in the data sets are multiplied by 2.
7. Multiply every number in the data set A) by 2 (10, 18, 24, 12), and find the new standard deviation.
8. Was your answer to question 6 correct? Can you explain what may have happened?