

ARRANGED HOUR FOR MATH 50

Math 50 – Section 4.2

Measures of Spread

Name _____

Instructor _____

Date _____

1. Consider the following sample of data collected:

23.5, 45.1, 32.6, 45.1, 32.6, 18.6, 45.1, 87.3

- a) Find the mean, median, mode, range, variance and standard deviation for the data.

Mean = _____ Median = _____ Mode = _____

Range = _____ Standard Deviation = _____

Variance = _____

- b) In general, if you add 3 to each number in any data set, would you expect the standard deviation of that data to increase, decrease, or stay the same as before? Explain why.

2. Thirteen statistics students' anonymous responses to a survey administered by a statistician are described in the following table. Answer the following, include appropriate units:

<u>Student</u>	<u>Major</u>	<u>Daily Exercise (min.)</u>	<u>Study Time (hrs.)</u>
1	Psychology	10	6
2	Undecided	23	6.5
3	Film	15	8
4	Business	26	10
5	Journalism	31	5
6	Psychology	35	4
7	Undecided	47	7.5
8	Film	54	9
9	Business	55	10
10	Journalism	30	5
11	Psychology	45	4
12	Undecided	35	8
13	Film	40	4

- a) Calculate the mean, variance and standard deviation for the data in the Daily Exercise column.

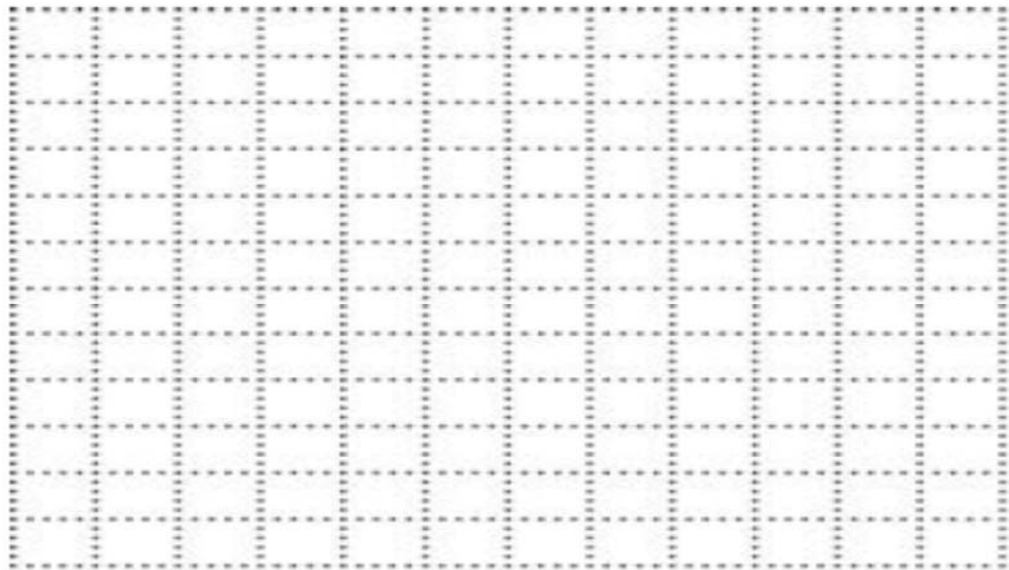
Mean = _____ Standard Deviation = _____ Variance = _____

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b) Complete the following frequency table using the data set:

Daily Exercise (min.)	Frequency
10 - 19	
20 - 29	
30 - 39	
40 - 49	
50 - 59	

c) Construct a frequency histogram, using the table from the previous part.



d) According to the Empirical Rule, roughly what percentage of data should fall within 2 standard deviations of the mean?