

Math 160  
Professor Busken  
Measures of Variation

Name: \_\_\_\_\_

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For questions 1—3, use the *population data* given below.

22 33 38

1. What is the correct formula for standard deviation? 1. \_\_\_\_\_

2. Determine the standard deviation of the data set. 2. \_\_\_\_\_

3. Determine the variance of the data set. 3. \_\_\_\_\_

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For questions 4—6, use the *sample data* given below. Environmental scientists measured the greenhouse gas emissions of a sample of cars. The amounts listed below are in tons (per year), expressed as CO<sub>2</sub> equivalents.

7.2 7.1 7.4 7.9 6.5 7.2 8.2 9.3

4. Determine the range of the data. 4. \_\_\_\_\_
5. What is the correct formula for standard deviation? 5. \_\_\_\_\_
6. Determine the standard deviation of the data set. 6. \_\_\_\_\_

7. Determine the variance of the data set. 7. \_\_\_\_\_

8. Use your calculator to determine the mean, standard deviation, variance and range for the given data set. Double check that your values from questions 4—6 are correct!