

Unit 9: Data Collection and Analysis
Review Worksheet ~ Lessons 1 and 2

1. In 2014, the highest ACT math scores were as follows: Connecticut 24.1, Delaware 23.2, Maine 23.6, Massachusetts 24.6, Minnesota 23.0, New Hampshire 24.2, New Jersey 23.7, New York 23.8, Pennsylvania 22.8, Rhode Island 22.8, Vermont 23, and Washington 23.3.

- A. Create a table using this data.
- B. Calculate the following data descriptors: mean, median, mode, range

Find each missing value.

- 2. 5, 3, 5, 8, 7, 8, x: mean = 6
 - 3. 8, 9, 3, 6, 3, 4, 2, 4, 7, y: mode = 4
 - 4. 12, 15, 23, 12, 15, 21, 5, 13, z: range = 20
5. This is a list of George's golf scores for last season: 82, 78, 85, 82, 83, 79, 80, 80, 86, 130
- A. What are the mean, median, and mode of this data set?
 - B. Which one best describes this data set? Explain.

6. The table shows the weight of certain dog breeds.

Dog Breed	Standard Poodle	Irish Setter	Bull Terrier	Chihuahua	Boxer	Weimaraner	Labrador Retriever
Weight (kg)	31.8	31.75	31.8	2.72	34.0	32.0	31.8

Which weight is the outlier? Explain how you know.

7. How will each descriptor (mean, median, mode, and range) will change when 10 is added to the data set of 7, 6, 5, 6, 5, 4, 3, 7, 5, 3? Which descriptor changed the most?

8. A new coach has been working with the long jump team this month, and the athlete's performance has changed. Here is a table showing the change.

Name	Change in Length of Jump
Augustus	+ 0.15 m
Octavius	+ 0.11 m
Caesar	+ 0.06 m
Brutus	+ 0.12 m
Cassius	+ 0.06 m
Rufus	- 0.56 m

- A. Which change is the outlier?
- Copy the following table.

	With Outlier	Without Outlier	Change
Mean			
Median			
Mode			
Range			

- B. Calculate the mean, median, mode and range of all the jumpers.
- C. Circle the descriptor (mean, median, mode, and range) that best describes this set of data.
- D. Calculate the mean, median, mode, and range of the jumpers excluding the outlier.
- E. Circle the descriptor (mean, median, mode, and range) that best describes this set of data.
- F. Write about the change that occurred the outlier was included in the data set.

9. The table shows the ages of the 10 youngest presidents of the United States of America.

President	Age (years)
Theodore Roosevelt	42
John F. Kennedy	43
Bill Clinton	46
Ulysses S. Grant	46
Barack Obama	47
Grover Cleveland	47
Franklin Pierce	48
James Garfield	49
James K. Polk	49
Millard Fillmore	50

The oldest person to become President of the United States was Ronald Regan who became President at the age of 69.

Copy the following table:

	With Regan	Without Regan	Change
Mean			
Median			
Mode			
Range			

- A. Calculate the mean, median, mode and range of the 10 youngest Presidents.
- B. Circle the descriptor (mean, median, mode, and range) that best describes this set of data.
- C. Calculate the mean, median, mode, and range of the 10 youngest Presidents and President Ronald Regan.
- D. Circle the descriptor (mean, median, mode, and range) that best describes this set of data.
- E. Write about the change that occurred when President Ronald Regan's age was included in the data set.