Center #1 – Display the data in a dot plot. Identify any clusters, peaks or gaps in the data.

1.

Distance (feet)			
56	55	56	57
58	54	51	55
51	56	49	56

Peak: _____ Gap: _____ Cluster: _____

2.

Weight (pounds)				
83	88	89	90	89
91	89	84	90	92
90	88	89	83	88

Peak: _____ Gap: _____ Cluster: _____

Center #2 – Find the mean, median, mode, and range of the data. Show your work!

1) 8, 8, 6, 8, 2, 4, 6

2) 24, 74, 61, 29, 38, 27, 68, 54

Center #3 – Find the Interquartile Range of the data and any that are outliers. Show your work!

14, 25, 97, 55, 66, 52, 72, 52, 74, 98

Center #4 – Find the mean, median, and mode. Show your work!

Shoe Sizes			
6	8.5	6	9
10	7	8	9.5

Mean: _____

Median: _____

Mode: _____

- What if someone shows up with a shoe size of 21.5? What is the new mean, median, mode?

New Mean: _____

New Median: _____

New Mode: _____

For the new data, which measure of center represents the data the best? Why?

Center #5 – Identify the median, first quartile, third quartile, IQR, and any outliers. Show your work!

Prices of Monitors (dollars)				
130	150	190	100	175
120	165	140	180	190

Median: _____

Q1: _____

Q3: _____

IQR: _____

Outliers: _____

Center #6 – Determine whether each question is a statistical question. Explain how you know.

1. How many planets are in our solar system?

2. What is the favorite TV show of sixth grade students?

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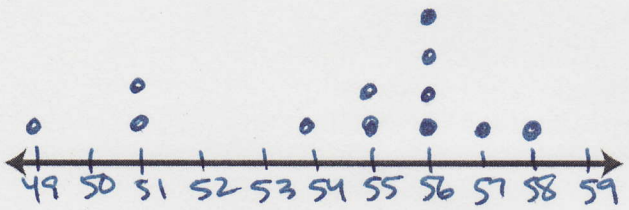
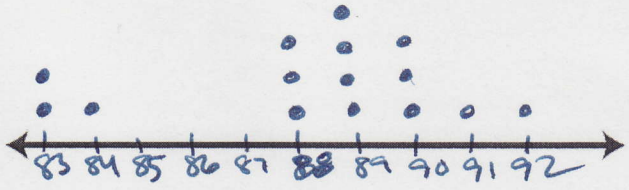
58	54	51	55
51	56	49	56



Peak: 56 Gap: 50, 52-53 Cluster: 54-57

2.

Weight (pounds)				
83	88	89	90	89
91	89	84	90	92
90	88	89	83	88



Peak: 89 Gap: 85-87 Cluster: 88-90

Center #2 – Find the mean, median, mode, and range of the data. Show your work!

1) 8, 8, 6, 8, 2, 4, 6 = 42 ÷ 7 = 6
Mean

2, 4, 6, 6, 8, 8, 8
Median

Mode: 8

Range: 8 - 2 = 6

2) 24, 74, 61, 29, 38, 27, 68, 54 = 375 ÷ 8
$46\frac{7}{8}$ or 46.875
Mean

24, 27, 29, 38, 54, 61, 68, 74
38 + 54 = 92 ÷ 2 = 46
Median

Mode: No mode

Range: 74 - 24 = 50

Center #3 – Find the Interquartile Range of the data and any that are outliers. Show your work!

14, 25, 97, 55, 66, 52, 72, 52, 74, 98

14, 25, 52, 52, 55, 66, 72, 74, 97, 98
Q1 = 52
Median = 60.5
Q3 = 74

IQR: 74 - 52 = 22

22 × 1.5 = 33

52 - 33 = 19

74 + 33 = ~~107~~

14 is an outlier

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Center #4 – Find the mean, median, and mode. Show your work!

Shoe Sizes			
6	8.5	6	9
10	7	8	9.5

$= 64 \div 8 = 8$

Mean: 8

Median: 8.25

6, 6, 7, 8, 8.5, 9, 9.5, 10

8.25

Mode: 6

- What if someone shows up with a shoe size of 21.5? What is the new mean, median, mode?

New Mean: 9.5

$64 + 21.5 = 85.5 \div 9 = 9.5$

New Median: 8.5

6, 6, 7, 8, 8.5, 9, 9.5, 10, 21.5

New Mode: 6

For the new data, which measure of center represents the data the best? Why?

Median because mean was affected too much by the outlier.

Center #5 – Identify the median, first quartile, third quartile, IQR, and any outliers. Show your work!

Prices of Monitors (dollars)				
130	150	190	100	175
120	165	140	180	190

100, 120, 130, 140, 150, 165, 175, 180, 190, 190

Q1 157.5 Q3

Median: 157.5

Q1: 130

Q3: 180

IQR: 50

$180 - 130 = 50$ IQR

$50 \times 1.5 = 75$

$130 - 75 = 55$ ~~55~~ $180 + 75 = 255$ ~~255~~

Outliers: None

Center #6 – Determine whether each question is a statistical question. Explain how you know.

1. How many planets are in our solar system?

No, it's a fact.

2. What is the favorite TV show of sixth grade students?

Yes, there is no correct answer

Center #6 – Determine whether each question is a statistical question. Explain how you know.

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