

NAME: _____

Statistics and Probability

Set 6: Analyzing Data Using Graphs

Station 4

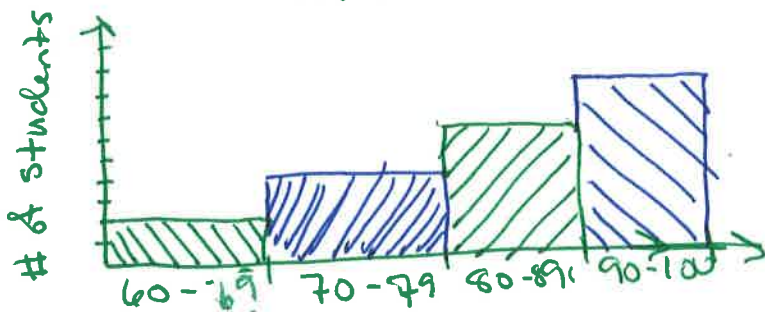
At this station, your group will be constructing two different histograms. Use the following set of data for both histograms.

A teacher gives a test to her twenty students. They received the following grades:

87, 80, 90, 60, 78, 79, 80, 95, 97, 98, 99, 95, 75, 67, 79, 83, 84, 100, 97, 83

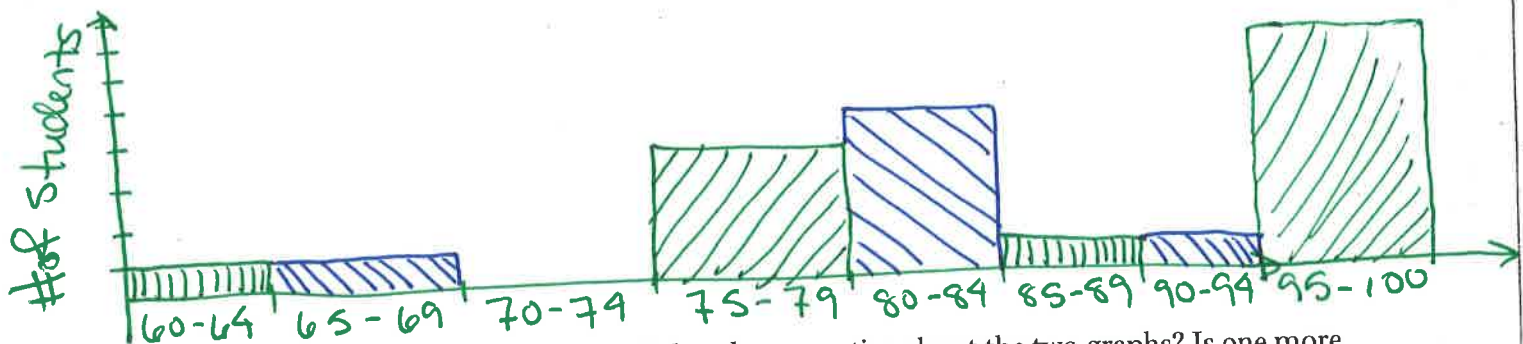
For the first histogram, the intervals for grades should be ten points. Construct this histogram in the space below.

Students test scores.



For the second histogram, the intervals for grades should be five points. Construct this histogram in the space below.

Students test scores.



Discuss the histograms with your group. What do you notice about the two graphs? Is one more informative than the other?

The second one is more informative. It gives a better description of groups of students.

How does having different intervals affect how the graph looks? Explain. They can show different patterns in the data.

Student Name: _____

Score: _____

Answers:

56, 45, 78, 98, 64, 56, 79, 80, 97, 47, 59,
86, 67, 52, 41, 70, 82, 52, 40, 64, 61, 80

Stem	Leaf
4	0, 1, 5, 7
5	2, 2, 6, 6, 9
6	1, 4, 4, 7
7	0, 8, 9
8	0, 0, 2, 6
9	7, 8

101, 127, 134, 123, 107, 111, 118, 129,
148, 142, 115, 104, 123

Stem	Leaf
10	1, 4, 7
11	1, 5, 8
12	3, 3, 7, 9
13	4
14	2, 8

118, 119, 145, 135, 139, 150, 148, 133,
143, 114, 158, 150, 116, 149, 135, 155

Stem	Leaf
11	4, 6, 8, 9
12	
13	3, 5, 5, 9
14	3, 5, 8, 9
15	0, 0, 5, 8

83, 86, 92, 13, 28, 53, 49, 28, 49, 66, 50,
81, 18, 27, 68, 81, 45, 53, 21, 17, 55, 80

Stem	Leaf
1	3, 7, 8
2	1, 7, 8, 8,
3	
4	5, 9, 9
5	0, 3, 3, 5
6	6, 8
7	
8	0, 1, 1, 3, 6
9	2

Mean, Median, Mode, and Range (A) Answers

Calculate the mean, median, mode, and range of each set of numbers.

1) {18, 18, 63, 63, 84}

Mean: 49.2
Median: 63

Modes: 18, 63
Range: 66

2) {19, 21, 29, 32, 89}

Mean: 38
Median: 29

No mode.
Range: 70

3) {41, 41, 41, 44, 90}

Mean: 51.4
Median: 41

Mode: 41
Range: 49

4) {25, 37, 39, 85, 85}

Mean: 54.2
Median: 39

Mode: 85
Range: 60

5) {12, 36, 64, 65, 82}

Mean: 51.8
Median: 64

No mode.
Range: 70

6) {30, 57, 59, 76, 91}

Mean: 62.6
Median: 59

No mode.
Range: 61

7) {27, 27, 49, 77, 84}

Mean: 52.8
Median: 49

Mode: 27
Range: 57

8) {25, 46, 62, 76, 97}

Mean: 61.2
Median: 62

No mode.
Range: 72

9) {22, 35, 58, 63, 75}

Mean: 50.6
Median: 58

No mode.
Range: 53

10) {45, 45, 47, 88, 89}

Mean: 62.8
Median: 47

Mode: 45
Range: 44

11) {58, 84, 90, 90, 97}

Mean: 83.8
Median: 90

Mode: 90
Range: 39

12) {25, 36, 36, 40, 68}

Mean: 41
Median: 36

Mode: 36
Range: 43

13) {18, 18, 33, 34, 54}

Mean: 31.4
Median: 33

Mode: 18
Range: 36

14) {19, 19, 27, 36, 64}

Mean: 33
Median: 27

Mode: 19
Range: 45

15) {34, 52, 75, 85, 90}

Mean: 67.2
Median: 75

No mode.
Range: 56

16) {55, 57, 68, 82, 99}

Mean: 72.2
Median: 68

No mode.
Range: 44

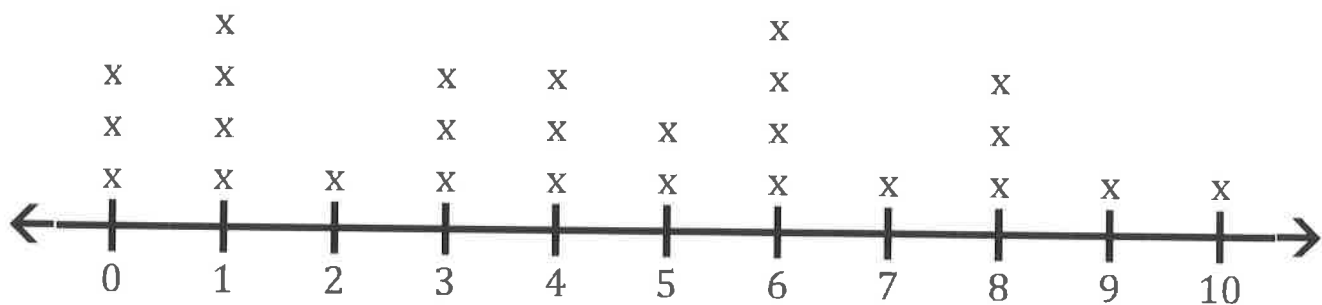
Constructing Line Plots (A) Answers

Construct a line plot from the data set then answer the questions.

Data Set 1

4	9	2	4	3	5	6	8	3	8	8
6	5	6	0	0	3	1	0	4	6	1
1	10	1	7							

Line Plot 1



1. Determine the minimum value, maximum value and range of the data.

Minimum: 0 Maximum: 10 Range: 10

2. Determine the count, median, mode and mean of the data. Round the mean to one decimal place if necessary.

Count: 26 Median: 4 Mode: 1 6 Mean: 4.3