Stem and Leaf Plots & Histograms

Objective: Students will be able to construct a histogram from a frequency table.

Stem and Leaf Plot

A way to organize raw data in a table by representing rounded data to two places and putting the common first digits as the stems and the second digits as the leaves.

84 → 8|4

2456 → 2|5

Key: 2|5 means 2500

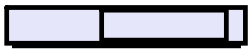
Frequency Table

A table that shows the frequency for each category or group of data.

Histogram

A bar graph where the data from a frequency table is grouped and represented in equal intervals from the classes.

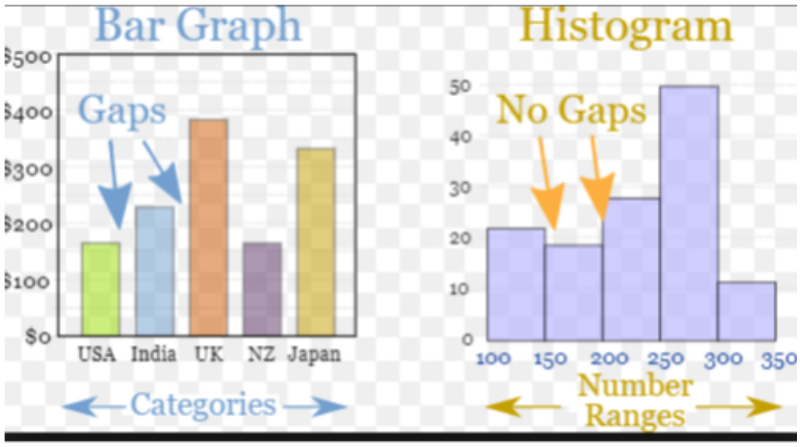
NOTE: There are no gaps between the bars because there should not be gaps between intervals.



What is the difference between a bar graph and a histogram?

Bar graph has categories at the bottom and may or may not have gaps between bars

Histograms have number intervals at the bottom and no gaps, meaning if there is a gap it is because there was 0 data for that interval.



Example 1: What is the average number of snap chats sent by your classmates?

Raw Data

24, 175, 140
65, 128, 0, 180
0 180 100
1000 100

Key: 0 | 2 means 20
1 | 7 means 170

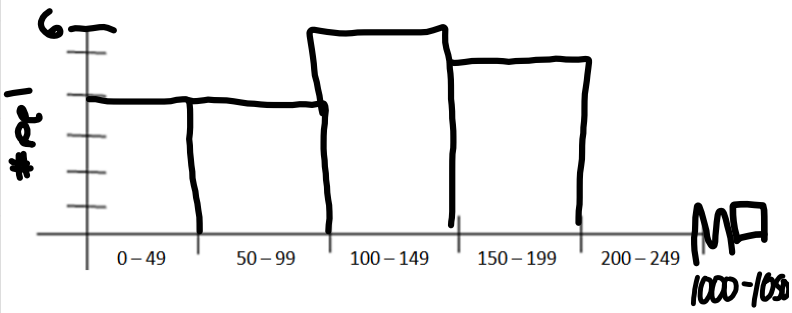
Stem	Leaf
0	2 7 0 0 1 8 5 5
1	7 4 2 8 8 0 0 5 8 0 2
2	
3	
4	
5	
6	
7	
8	
9	
10	0

Example 1: Complete the following frequency table comparing the average number of snap chats sent by your classmates and then create a histogram from the information.

Frequency Table

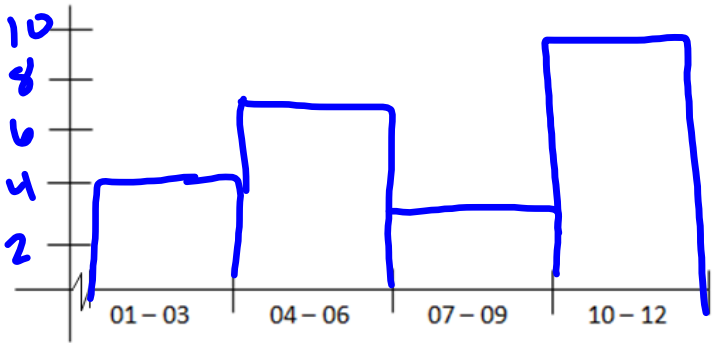
# of texts sent daily	Tally Marks	Frequency
0 - 49	1111	4
50 - 99		4
100 - 149		6
150 - 199		5
200 - 249		

Histogram



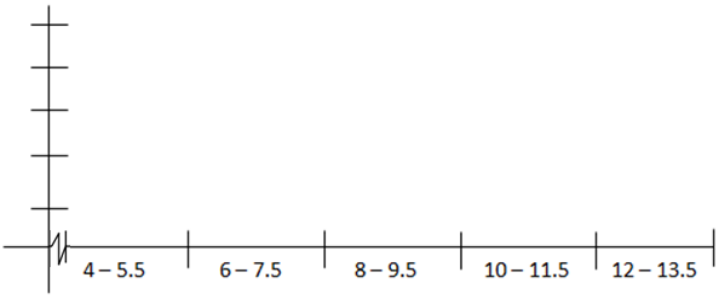
Example 2: Complete the following frequency table comparing the birthdays of your classmates and then create a histogram from the information.

Month of Birthday	Tally Marks	Frequency
01 - 03		4
04 - 06		7
07 - 09		3
10 - 12		9



Example 3: Complete the following frequency table comparing the average shoe size of your classmates and then create a histogram from the information.

Shoe Size	Tally Marks	Frequency
4 - 5.5		
6 - 7.5		
8 - 9.5		
10 - 11.5		
12 - 13.5		



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Example 4: make a Stem and Leaf plot to organize the data collected from the average heights of Algebra 2 Students. Then make a histogram.

Stem	Leaf

Height (in inches)	Tally Marks	Frequency
50 - 54		
55 - 59		
60 - 64		
65 - 69		
70 - 74		

Data: 63, 69, 72, 74, 76, 74, 61, 70, 64, 73, 58, 67