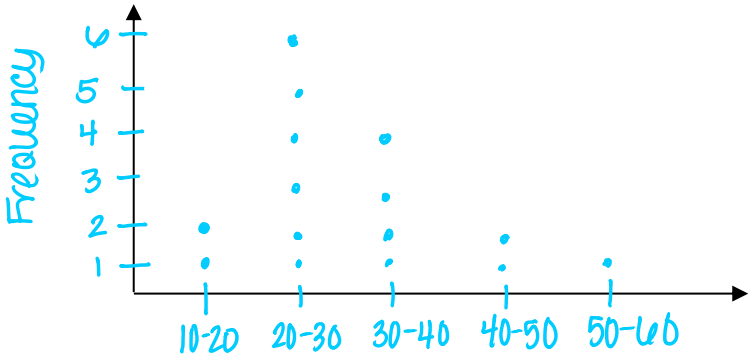
Unit 10 – Day 8 Notes
Dot Plots, Data Distribution & Central Measures of Tendency

Dot Plot: another display quantitative or categorical data w/ dots representing the frequency

The following data set outlines the number of likes Mrs. Berenson received on her last 15 Instagram posts. Create a frequency table and dot plot to organize the data below.

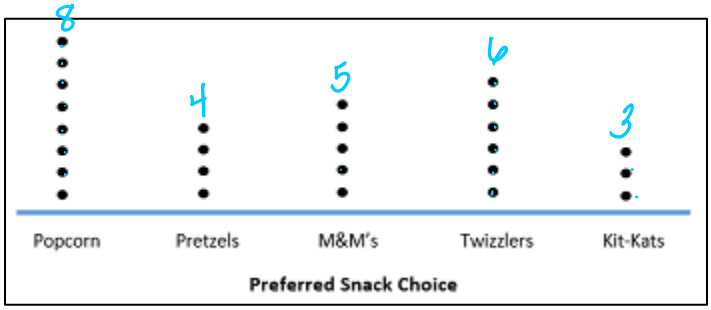
30	40	25	22	32	26	31	51	18	19	26	46	24	38	29

Interval	Frequency
10-20	II
20-30	||||| I
30-40	IIII
40-50	II
50-60	I



Interpreting Dot Plots

The dot plot below outlines students' favorite snack choice. Use the display to answer the following.



1. How many more students prefer popcorn to Kit-Kats?

   5

2. How many total students were surveyed?

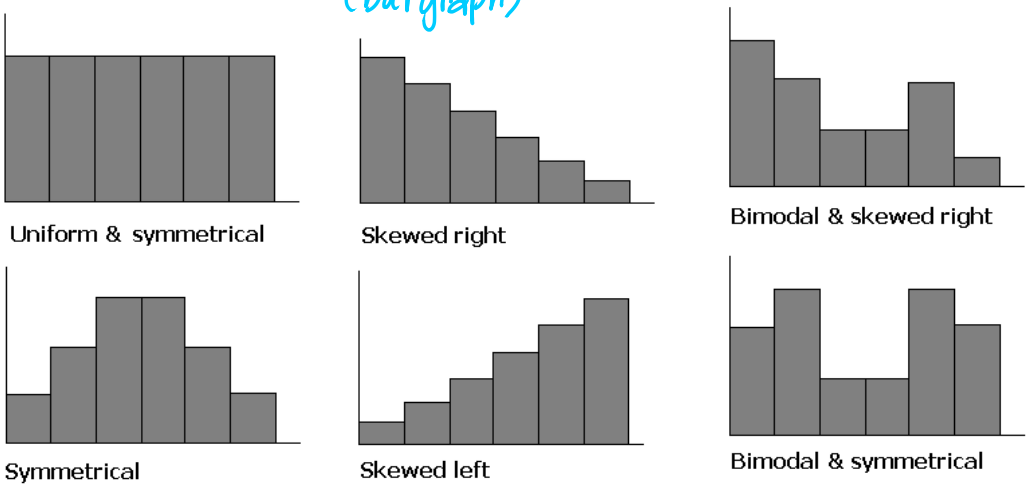
   26

3. What percentage of students prefer M&Ms?

   5/26 = 19%

Data Distribution: Describes the shape of a bar graph, histogram, or dot plot (BUT only if the dot plot is illustrating Quantitative data).

(bar graph)



Measure of Central Tendency	How do I find it?
MEAN	add all #'s / total # of entries
MEDIAN	increasing order.. Look for the term in the middle (if no middle ... add 2 terms ÷ 2)
MODE	the # that occurs the most often

One More Vocab Word! **RANGE:** max value – min value

Sick of T-Swift?

The data below shows the number of times Taylor Swift songs were played in a given 24-hour period on 103.5 KISS-FM over the past 2+ weeks.

19	15	22	12	20	12	19	17	21	25	18	24	11	9	10

1. Identify the range.

9 10 11 12 12 15 17 (18) 19 19 20 21 22 24 25

25 − 9 = 16

2. What are the following measures of central tendency?

Mean: $\frac{\text{sum}}{15} = 16.93$

Median: 18

Mode: 12 & 19

3. Which measure of central tendency best describes the scores? Why?

4. What effect does the score of 25 have on the measures of central tendency for this data set?

Mean? $\frac{\text{sum}}{16} = 17.44$

Median? $\frac{18+19}{2} = 18.5$

Mode? 12, 19, 25

Making the Grade

Your grades on three exams are 80, 93 and 91. What grade do you need on the next exam to have an *average* of 90 on the four exams

$$\frac{80+93+91+x}{4} = 90$$

$$80+93+91+x = 360$$

$$\boxed{x = 96}$$