

Measures of Center - Notes

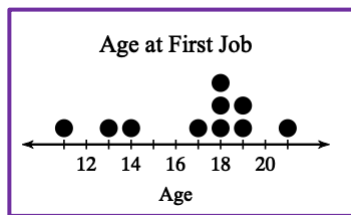
When describing a set of one-variable data, one of the most important features is a measure of the *center*. There are several ways to do this but the most common are the *mean, median, mode*.

- The *mode* is the simplest measure of center. It is just the value that occurs most often (you could say it's the most popular value. There are two special cases...
 - If no values repeat, there is no mode.
 - If there is a tie for which value occurs most often, then those values are all the mode.
- The *median* is in the value in the middle – when the values are put in numerical order. To find the median, put all of the values in order and find the one in the middle...
 - If there are an even number of values then the median will be the mean of the two values in the middle.
- The *mean* is what most people are referring to when they say average (there are different kinds of averages, so we are being more careful and specific when we say mean). To find the mean, add up all of the values and divide by how many there are.
 - So, to find the mean for the following data

Monthly Revenue			
53,600	51,300	57,650	87,090
74,750	57,530	56,110	60,720
31,050	59,290	75,630	

just add up all of the values for monthly revenue and divide by 11, the number of values. You should get an answer of \$60,429.09 (2 decimal places is a good place to round because we are talking about money)

- To find the mean for the following data, you have to be a bit more careful...

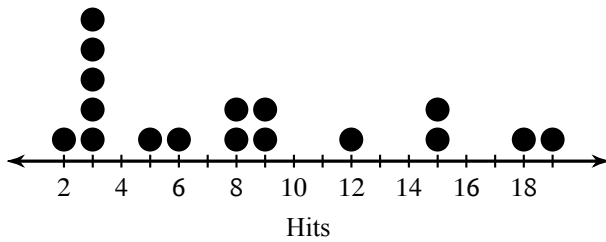


There are repeated values here and they need to be included – there are three 18's and two 19's. So when you add them up, divide by 10. You should get an answer of 16.8

SRHS Math 1

Find the mode for each data set.

1) Hits in a Round of Hacky Sack

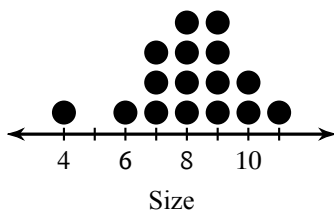


2) Average Time to Maturity

Plant	Days	Plant	Days	Plant	Days	Plant	Days
Cucumber	58	Gooseneck Gourd	120	Purple King Bean	75	Brussel Sprouts	90
Red Onion	95	White Onion	135	Radish	22	Sugar Baby Watermelon	75
Asparagus	730	Peanut	120	Cheyenne Pepper	64	Kentucky Wonder Bean	65
Spinach	44	Okra	55	Radicchio	90	Bell Pepper	75

Find the median for each data set.

3) Shoe Size



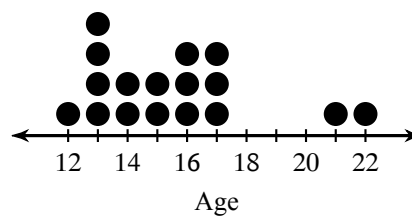
4) Age at First Job

17	13	14	13	16	13	17
17	13	16	17	18	15	15
16	16	12				

5) Single Family Home Prices

363,300	358,500	329,400	342,800
347,100	341,700	344,300	366,100
349,800	347,800	344,000	342,800
360,400	346,900	343,500	

6) Age at First Job

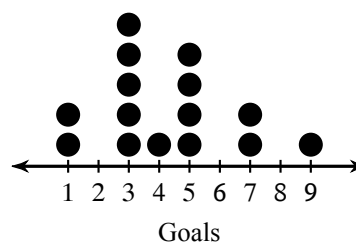


Find the mean for each data set.

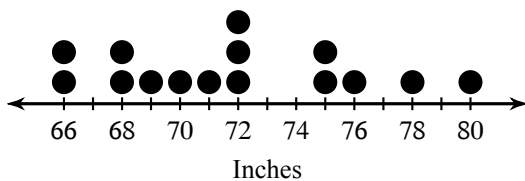
7) Annual Precipitation (Inches)

36.4	35.4	49	31.8	52.8
15	66.8	55.2	13.2	17.4
25.8	27.2	54.8	37.2	68.4
14.6				

8) Goals in a Hockey Game



9) Adult Male Heights



10) Shoe Size

7.5	7.5	6	9	7.5	7.5
11	8	8.5	10	5.5	7.5
9	7	9			