

Study Guide

Integration: Statistics
Measures of Central Tendency

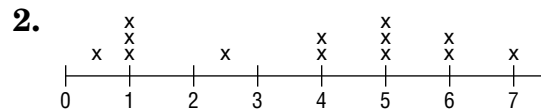
In working with statistical data, it is often useful to have one value represent the complete set of data. For example, **measures of central tendency** represent centralized values of the data. Three measures of central tendency are the **mean**, **median**, and **mode**.

Definitions		Examples
Mean	Sum of the elements in the set divided by the number of elements in the set.	Data: 24, 36, 21, 30, 21, 30 $\frac{24 + 36 + 21 + 30 + 21 + 30}{6} = 27$
Median	The middle of a set of data when the numbers are arranged in numerical order. In an even number of elements, the median is halfway between the two middle elements.	Data: 21, 21, 25, 30, 31, 42 $\frac{25 + 30}{2} = 27.5$
Mode	The number that occurs most often in a set of data.	Data: 21, 21, 24, 30, 30, 36 There are two modes, 21 and 30.

Find the mean, median, and mode for each set of data.

1.

Month	Days above 90°F
May	4
June	7
July	14
August	12
September	8



3. 3, 6, 6, 3, 6, 6, 3, 3 4. 19, 3, 0, 1 5. $\frac{1}{4}, \frac{2}{5}, \frac{2}{8}, \frac{1}{3}$ 6. $1, \frac{1}{2}, 2, \frac{1}{3}, 3, \frac{1}{4}, 4, \frac{1}{8}$

Find the median and mode(s) of the data shown in each stem-and-leaf plot.

7.

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

$3|2 = 32$

8.

Stem	Leaf
9	0 0 1 3 9
10	2 2 5
11	
12	0 3 3 8 8 9

$10|5 = 105$