

Name _____

Date _____ Pd. _____

Notes: Central Tendency

Analyze Data Numbers that represent the centralized, or middle, value of a set of data are called **measures of central tendency**. Three measures of central tendency are the **mean, median, and mode**.

	Definition	Example
Mean		Data: 24, 36, 21, 30, 21, 30;
Median		Data: 21, 21, 25, 30, 31, 42;
Mode		Data: 21, 21, 24, 30, 30, 36;

Example

Which measure of central tendency best represents the data?

Stem	Leaf
9	4 6 8 9 9
10	0 1 2 4 8 9
11	2 2
12	0 1 9 4 =

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Exit Card: Central Tendency

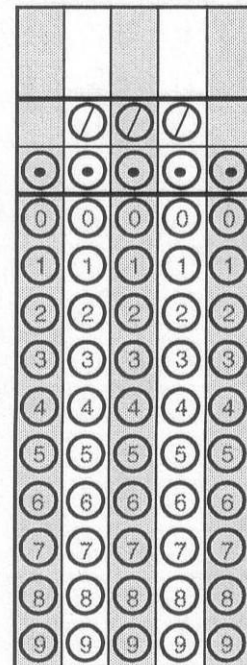
A shoe salesman reports that the **mode** size of shoes sold in the store was 7. What is the meaning of this statement?

- A. At least half the shoes sold were of size greater than 7.
- B. The size sold most often was 7.
- C. When all the sizes were added and divided by the number of shoes sold, the result was 7.
- D. At least 50% of all shoes sold were size 7.

On her first three games, Sally bowled 120, 140, and 130. What is the minimum score she must bowl in her fourth game in order to have a mean of at least 150?

- A. 130
- B. 150
- C. 180
- D. 210

Ten **equal** scores have a mean of 100. If one score is doubled, and the other nine remain the same, what is the mean of the new set of scores?



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Homework: Pages 92 – 94 (17 – 19, 23, 24, 26, 27, 29 – 31)

The table shows the seeds, or rank, of the NCAA mens' basketball Final Four from 1991 to 2001.

Year	Seeds			
1991	1	1	2	3
1992	1	2	4	6
1993	1	1	1	2
1994	1	1	2	3
1995	1	2	2	4
1996	1	1	4	5
1997	1	1	1	4
1998	1	2	3	3
1999	1	1	1	4
2000	1	5	8	8
2001	1	1	2	3

17. How many of the team in the Final Four were *not* number 1 seeds?
18. How many teams were seeded higher than third (Hint: higher seeds have the lower numerical value)?
19. Which measure of central tendency best describes the data? Explain.

112	100	128	120	134	118	106	110	109	112
100	118	117	116	118	121	114	114	105	109
107	112	114	115	118	117	118	125	106	110
122	108	110	121	113	120	119	111	104	111
120	113	120	117	105	110	118	112	114	114

Source: *The World Almanac*

23. Which temperature occurs most frequently?
24. Does the mode best represent the data? Explain.

The stem-and-leaf plot shows the magnitudes of earthquakes occurring in 2000 that measured at least 5.0 on the Richter scale.

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

5 | 1 = 5.1 magnitude

26. What was the most frequent magnitude of these earthquakes?

27. Which measure of central tendency best describes this set of data? Explain.

Country	Gold	Silver	Bronze	Total
United States	40	24	33	97
Russia	32	28	28	88
China	28	16	15	59
Australia	16	25	17	58
Germany	13	17	26	56
France	13	14	11	38
Italy	14	8	13	35
Cuba	11	11	7	29
Britain	11	10	7	28
Korea	8	10	10	28

Source: www.espn.com

29. How many countries won fewer than 25 gold medals?

30. What was the median number of gold medals won by a country?

31. Is the median the best measure to describe this set of data? Explain.