

Name: _____ Period: _____ Date: _____

Measures of Central Tendency and Dispersion Bell Work

Solve problems involving Measures of Central tendency and Dispersion.

The following are the scores of 9 students in stat quiz: 1, 2, 8, 7, 6, 11, 11, 11, 15.

1. Find the mean.
2. Find the median.

3. Find the Mode.
4. Find the range.

The following are the scores of the students in science quiz

10	7	5	12	12
9	6	14	2	11
7	8	3	1	8

5. Find the mean.
6. Find the median

7. Find the mode.
8. Find the range

9. Find the Variance.
10. Find the standard deviation.

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Answer:

Solve problems involving Measures of Central tendency and Dispersion.

The following are the scores of 9 students in stat quiz: 1, 2, 8, 7, 6, 11, 11, 11, 15.

1. Find the mean.

$$\bar{x} = \frac{1 + 2 + 8 + 7 + 6 + 11 + 11 + 11 + 15}{9} = \frac{72}{9} = 8$$

2. Find the median.

1, 2, 6, 7, 8, 11, 11, 11, 15

the median is 8

3. Find the Mode.

The mode is 11

4. Find the range.

$$R = 15 - 1 = 14$$

The following are the scores of the students in science quiz

10	7	5	12	12
9	6	14	2	11
7	8	3	1	8

5. Find the mean.

$$\bar{x} = \frac{10 + 7 + 5 + 12 + 12 + 9 + 6 + 14 + 2 + 11 + 7 + 8 + 3 + 1 + 8}{15} = \frac{112}{15} = 7.47$$

6. Find the median.

1, 2, 3, 5, 6, 7, 7, 8, 8, 9, 10, 11, 12, 12, 14

The median is 8.

7. Find the mode.

The mode is 8, 7 and 12

8. Find the range

$$R = 14 - 1 = 13$$

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9. Find the Variance

x	$ x - \bar{x} $	$(x - \bar{x})^2$
1	-6.47	41.8609
2	-5.47	29.9209
3	-4.47	19.9809
5	-2.47	6.1009
6	-1.47	2.1609
7	-0.47	0.2209
7	-0.47	0.2209
8	0.53	0.2809
8	0.53	0.2809
9	1.53	2.3409
10	2.53	6.4009
11	3.53	12.4609
12	4.53	20.5209
12	4.53	20.5209
14	6.53	42.6409
115		205.9135

$$s_N^2 = \frac{\sum(x - \bar{x})^2}{N - 1} = \frac{205.91}{14} = 14.7$$

10. Find the standard deviation.

$$s = \sqrt{s_N^2} = \sqrt{14.7} = 3.84$$