

Name: _____ Period: _____ Date: _____

Measures of Central Tendency and Dispersion Assignment

Solve problems involving measures of central tendency.

1. Find the mean score of the test score of five students in math, their scores as follows: 45, 43, 39, 38, and 30.

The following data are the scores from a first grade classes English quiz: 10, 12, 14, 10, 15, 18, 20, and 20.

2. Find the mean.
3. Find the median
4. Find the mode.

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Measures of Central Tendency and Dispersion Assignment

The table below shows the result of the Ms. Jens mathematics quiz.

Scores	Frequency
25	3
24	5
23	15
22	12
21	10
20	8

5. Find the mean score.

6. Find the median score.

7. Find the modal score.

Find the mean of the number of AIDS cases in the four hospitals listed below.

AIDS Cases in Different Hospitals

Hospital	A	B	C	D
1999	500	211	211	100
2000	400	350	250	100
2001	100	140	620	250
2002	80	140	401	300
2003	200	150	422	330

8. Mean number of AIDS Cases in Hospital A.

9. Mean number of AIDS Cases in Hospital B.

10. Mean number of AIDS Cases in Hospital C.

11. Mean number of AIDS Cases in Hospital D.

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Measures of Central Tendency and Dispersion Assignment

The owner of a newly opened internet cafe recorded the number of customers who are coming into his internet cafe'. Below is the tabulation of the number of costumers for 7 days.

Days	Number of Customers
1st day	8
2nd day	5
3rd day	9
4th day	12
5th day	12
6th day	10
7th day	15

12. Find the mean.

13. Find the median.

14. Find the mode.

Solve problems involving measures of dispersion.

The number of incorrect answers on a true or false mathematics proficiency test for a random sample of 20 students was recorded as follows:

3	3	5	6	1	2	1	4	4	5
1	3	3	2	5	4	4	5	1	2

15. Find the Range.

16. Find the sample variance.

17. Find the sample standard deviation.

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Measures of Central Tendency and Dispersion Assignment

The following are scores of 13 students in stat quiz: 1, 2, 8, 7, 6, 11, 11, 11, 15, 17, 23, 25, 28.

18. Find the range.

19. Find the variance.

20. Find the Standard Deviation.

Measures of Central Tendency and Dispersion Assignment

Answer:

Solve problems involving measures of central tendency.

1. Find the mean score of the test score of five students in math, their scores as follows: 45, 43, 39, 38, and 30.

$$\bar{x} = \frac{45 + 43 + 39 + 38 + 30}{5} = 39$$

The following data are the scores from a first grade classes English quiz: 10, 12, 14, 10, 15, 18, 20, and 20.

2. Find the mean.

$$\bar{x} = \frac{10 + 12 + 14 + 10 + 15 + 18 + 20 + 20}{8} = 14.875$$

3. Find the median

10, 10, 12, **14, 15**, 18, 20, 20

$$\bar{x} = \frac{14 + 15}{2} = 14.5$$

4. Find the mode.

10, 10, 12, 14, 15, 18, **20, 20**

The modes are **10** and **20**.

The table below shows the result of the Ms. Jens mathematics quiz.

Scores	Frequency
25	3
24	5
23	15
22	12
21	10
20	8

5. Find the mean score.

$$\bar{x} = \frac{3(25) + 5(24) + 15(23) + 12(22) + 10(21) + 8(20)}{53} = 22.15$$

Measures of Central Tendency and Dispersion Assignment

6. Find the median score.

Scores	Frequency	
25	3	3
24	5	8
23	15	23
22	12	35
21	10	45
20	8	53

Since the half of 53 is 26.5, arrange the frequency from lowest to highest then observe the data to which score the 26.5 will fall into. As shown in the table 26.5 fall with the score of 22. Then **the median is 22**.

7. Find the modal score.

The most frequent score is **23** then it **is the mode** of the distribution.

Find the mean of the number of AIDS cases in the four hospitals listed below.

AIDS Cases in Different Hospitals

Hospital	A	B	C	D
1999	500	211	211	100
2000	400	350	250	100
2001	100	140	620	250
2002	80	140	401	300
2003	200	150	422	330

8. Mean number of AIDS Cases in Hospital A.

$$\bar{x} = \frac{500 + 400 + 100 + 80 + 200}{5} = 256$$

9. Mean number of AIDS Cases in Hospital B.

$$\bar{x} = \frac{211 + 350 + 140 + 140 + 150}{5} = 198.2$$

10. Mean number of AIDS Cases in Hospital C.

$$\bar{x} = \frac{211 + 250 + 620 + 401 + 422}{5} = 380.8$$

11. Mean number of AIDS Cases in Hospital D.

$$\bar{x} = \frac{100 + 100 + 250 + 300 + 330}{5} = 216$$

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Days	Number of Customers
1st day	8
2nd day	5
3rd day	9
4th day	12
5th day	12
6th day	10
7th day	15

12. Find the mean.

$$\bar{x} = \frac{8 + 5 + 9 + 12 + 12 + 10 + 15}{7} = 10.14$$

13. Find the median.

5, 8, 9, 10, 12, 12, 15

The median is 10

14. Find the mode.

The mode is 12.

Solve problems involving measures of dispersion.

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Measures of Central Tendency and Dispersion Assignment

The number of incorrect answers on a true or false mathematics proficiency test for a random sample of 20 students was recorded as follows:

3 3 5 6 1 2 1 4 4 5
1 3 3 2 5 4 4 5 1 2

15. Find the Range.

$$R = 6 - 1 = 5$$

16. Find the sample variance.

$$\bar{x} = \frac{64}{20} = 3.2$$

x	$ x - \text{mean} $	$(x - \text{mean})^2$
1	2.2	4.84
1	2.2	4.84
1	2.2	4.84
1	2.2	4.84
2	1.2	1.44
2	1.2	1.44
2	1.2	1.44
3	0.2	0.04
3	0.2	0.04
3	0.2	0.04
3	0.2	0.04
4	0.8	0.64
4	0.8	0.64
4	0.8	0.64
4	0.8	0.64
5	1.8	3.24
5	1.8	3.24
5	1.8	3.24
5	1.8	3.24
6	2.8	7.84
64		47.2

$$s_N^2 = \frac{\sum(x - \bar{x})^2}{N - 1} = \frac{47.2}{19} = 2.48$$

17. Find the sample standard deviation.

$$s = \sqrt{s_N^2} = \sqrt{2.48} = 1.58$$

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The following are scores of 13 students in stat quiz: 1, 2, 8, 7, 6, 11, 11, 11, 15, 17, 23, 25, 28.

18. Find the range.

$$R = 28 - 1 = 27$$

19. Find the variance.

$$\bar{x} = \frac{155}{13} = 11.9$$

x	 x - mean 	(x-mean)²
1	10.9	118.81
2	9.9	98.01
6	5.9	34.81
7	4.9	24.01
8	3.9	15.21
11	0.9	0.81
11	0.9	0.81
11	0.9	0.81
15	3.1	9.61
17	5.1	26.01
18	6.1	37.21
23	11.1	123.21
25	13.1	171.61
155		660.93

$$s_N^2 = \frac{\sum(x - \bar{x})^2}{N - 1} = \frac{660.93}{12} = 55.08$$

20. Find the Standard Deviation.

$$s = \sqrt{s_N^2} = \sqrt{55.08} = 7.42$$