

**STATISTICS HANDOUT  
(MEASURE OF CENTRAL TENDENCY)**

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

1. 1, 2, 3, 3, 4, 7, 9, 11
2. 12, 14, 16, 13, 20
3. 1, 2, 2, 3, 4, 5, 6, 7, 5, 10
4. 1, 4, 4, 5, 8, 10, 12, 11, 8
5. 1, 3, 8, 12, 10, 8
6. 3, 14, 6, 2, 5, 7, 13, 14
7. 11, 12, 3, 5, 7, 16, 13, 6, 7, 10

8. The following table contains the number of traffic accidents in Nevada for the years 1960-1969. Find the mean, mode, median, and midrange for the number of accidents.

<u>YEAR</u>	<u>NUMBER</u>	<u>YEAR</u>	<u>NUMBER</u>
1960	436	1965	820
1961	833	1966	532
1962	714	1967	648
1963	1,201	1968	872
1964	749	1969	648

9. Employees working at the Akron plant of the United Bug company have complained that they are discriminated against in the company's pay scale when compared to the pay scale at the Canton plant. The employees and their salaries are listed below

<u>Akron Plant</u>		<u>Canton Plant</u>	
Mr. Jones	\$30,000	Mrs. Stein	\$20,000
Ms. Arthur	\$15,000	Mr. Patrick	\$20,000
Mr. Brady	\$15,000	Mr. Baron	\$20,000

- a. What is the mean salary for all employees?
- b. What is the mean salary for the Akron workers? For Canton workers?
- c. What is the median salary for Akron workers? For Canton workers?
- d. What is the midrange salary for Akron workers? For Canton workers?
- e. If you were a lawyer acting for United Bug which measure of central tendency would you use?
- f. If you were a lawyer for the Akron workers which measure of central tendency would you use?

10. The mean score of a set of 12 tests is 68. What is the sum of the 12 test scores?
11. The mean score on a set of 15 college entrance exams is 87. What is the sum of the 15 exam scores?
12. Two sets of data are given: the first set of data has 20 scores with a mean of 50, and the second set of data has 33 scores with a mean of 75. What is the mean if the two sets of data are combined?
13. In a math class Joe takes 10 tests with a mean score of 79. To get a 'B' in the course students need a mean score of 80. What is wrong with the argument that Joe missed getting a 'B' by 1 point?
14. The table below indicates the grades for fifty freshmen registered for MAT 114. Find the mean, mode, median, midrange, and range for the grades of the freshmen.

<u>Grade</u>	<u># of People</u>
A	4
B	18
C	10
D	12
F	6

15. The table below indicates the heights for a group of teenagers. Find the mean, mode, median, range, and midrange for the teenagers' heights.

<u>Height(inches)</u>	<u># of People</u>	<u>Height(inches)</u>	<u># of People</u>
72	2	64	6
70	1	62	7
68	2	60	5
66	5	58	2

16. On a math test the following scores were made in a class of ten students: 81, 74, 87, 94, 71, 68, 72, 77, 81, 89. Find the mean, mode, median, range, midrange, and standard deviation for the set of data.
17. An experiment consists of tossing 8 coins and recording the number of heads that appear. The coins are tossed 10 times and the number of heads were 2, 3, 4, 5, 5, 6, 3, 2, 7, 3, respectively; find the mean, mode, median, range, midrange, and standard deviation for the number of heads shown.

18. Find the standard deviation for each set of data. (Round your answers to the nearest tenth)

a. 8,10,10,16,21

b. 2,4,6,8,10

c. 16,4,4,0,9,9

d. 5,10,9,9,9,8

e. 10,12,12,13,14,14,9

f. 2,3,4,5,5,6,10,13

g. 19,2,3,17,13,5,7,11

19. In 1966 and 1967 four factories were compared to the national average for production capacity. The percents for the production capacities are listed below. In 1966, factories operated at 80% capacity with a standard deviation of 8%, whereas in 1967 the mean was 78% with a standard deviation of 3%. In comparison to the national average:

	1966 Capacity	1967 Capacity
A	80	78
B	64	78
C	96	81
D	72	81

- Which of the four factories increased their capacity from 1966 to 1967?
- Which of the four factories' capacity decreased from 1966 to 1967?
- Which of the four factories' capacity remained the same?

20. Four students are in the same sociology class. The scores for the first two exams are listed below. The first exam had a mean of 76 and a standard deviation of 6, whereas the second exam had a mean of 64 and a standard deviation of 4. Relative to the class:

	Exam 1	Exam 2
Ann	76	64
Art	82	60
Amy	58	64
Alex	70	56
Andy	76	64

- Which of the five people improved on the second exam?
- Which of the five people did the poorest second exam?
- Which of the five people performed the same on both exams?