**HW 2 – MEASURES OF CENTER AND SPREAD** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A major league baseball player got the following number of hits during each year of his career. Find mean, median, and mode:

55, 112, 183, 177, 187, 188, 190, 178, 158, 167, 151, 142, 116, 40

If this player is being traded and his agent is trying to show his strengths to other team managers, which measure of central tendency should he use? Why?

2. In your language class you have earned the following test scores: 81, 72, 53, 61; and only one test remains. If you need a mean score of 70 to earn a “C”, then what minimum score must you obtain on the test?

3. Calculate the mean, median, and mode from the following frequency distribution.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Score** | 11 | 15 | 9 | 7 | 14 | 10 |
| **Frequency** | 5 | 2 | 1 | 5 | 8 | 7 |

4. Sarah loves to shop for clothes every Saturday. For the past 6 Saturdays, she has spent the following amounts: $109, $72, $99, $15, $99, $89

a. Find mean, median and mode

b. If Sarah is trying to convince her parents she doesn’t spend too much money on clothes, which measure should she use?

5. In Sam’s physics course, a mean score of 80 on 10 tests is necessary for a “B”. Sam’s mean score for the 10 tests was a 79 and his instructor gave him a “C”. Sam protested that because he was so close, the instructor should have “just given him the one lousy point” and the “B”. Did Sam really only need one point for a “B”? Explain.

6. The mean score on four of a set of five scores is a 75. The fifth score is a 90. What is the mean of the five scores?

7. Suppose for a given month that the mean daily closing price (all numbers in dollars) for Expensive, Inc. common stock was 114.3 with a standard deviation of 13.7. For Cheap, Inc. stock, the mean daily closing price was 54.9 with a standard deviation of 4.9. Which stock was more VOLATILE?

8. Find the standard deviation for the following BY HAND: 5, 7, 8, 8, 8, 9, 10, 11, 15

9. Find the mean and standard deviation of the following using your calculator:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SCORE | 76 | 82 | 85 | 90 | 92 | 95 |
| FREQUENCY | 5 | 2 | 3 | 4 | 3 | 3 |

10. During April of 1999, the daily closing of the ABCD, WXY, and Z-corp, gave the following information:

 ABCD WXYZ Z-corp.

Mean closing values for April 1999 134.4 179.5 98.6

Standard deviation of closing values for July 1989 2.6 3.77 3.72

For each stock, compute the coefficient of variation and comment on the results of each stock.

11. Terrier and SFP are two stocks traded on the New York Stock Exchange. For the past seven weeks you recorded the Friday closing price (dollars per share):

Terrier: 32 35 34 36 31 39 41

SFP: 51 55 56 52 55 52 57

Compute the coefficient of variation for both Terrier and SFP. Compare the results and explain the meaning of these numbers.