Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Measures of Central Tendency Real-World Problems**

1. Susan’s test scores in Biology are shown below:

**73, 84, 91, 68, 83**

A. Which of the following measures would be the best for her report card?

a. mean b. median c. range d. mode

B. Which of the following statements is true?

a. The mean is greater than the median.

b. The range is greater than 50.

c. The median is between 80 and 90.

d. The mode is 23.

C. If she earns a 93 on the next test, how will her mean test score change?

a. The mean test score will decrease almost 3.

b. The mean test score will decrease by 0.

c. The mean test score will increase almost 3.

d. The mean test score will increase by 2.

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2. The average monthly precipitation (in inches) in Richmond, Virginia, for the months of January through April is listed below:

**3.24 3.16 3.61 2.96**

A. If the precipitation in May is 3.84 inches, which of the following measures will remain unchanged?

a. mean b. median c. mode d. range

B. With May’s precipitation added to the data set, which of the following statistical measures will change the most?

a. mean b. median c. mode d. range

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3. The average speeds of the winners of the Daytona 500 from 1995 to 2000 are listed below:

|  |  |
| --- | --- |
| **Year** | **Average Speed** |
| 1995 | 141.7 mph |
| 1996 | 154.3 mph |
| 1997 | 148.3 mph |
| 1998 | 172.7 mph |
| 1999 | 161.1 mph |
| 2000 | 155.7 mph |

A. What is the mean in miles per hour of the given speeds rounded to the nearest tenth?

B. If Buddy Baker’s 1980 winning speed of 177.6 is added to the data set, then it will have what effect?

a. The mean will decrease.

b. The mode will increase.

c. The median will increase.

d. The range will decrease.

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4. Justine calculated the median price for six new cars. The prices she used are listed below:

**$19,580 $24,987 $26,594 $10, 876 $12,235 $19,699**

If she suddenly realizes that the price of the fourth car was supposed to be $11,876, what would the effect on the median be if she recalculated it?

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5. The stats for the 2007 World Series are shown below. Which measure of central tendency is the least?

|  |  |
| --- | --- |
| **Player** | **Batting Average** |
| Pedroia | .278 |
| Hawpe | .250 |
| Lugo | .385 |
| Ortiz | .333 |
| Crisp | .500 |
| Tulowitzki | .231 |
| Varitek | .333 |