

A.S.16: Central Tendency: Recognize how linear transformations of one-variable data affect the data's mean, median, mode, and range

- 1 Mr. Taylor raised all his students' scores on a recent test by five points. How were the mean and the range of the scores affected?
 - 1) The mean increased by five and the range increased by five.
 - 2) The mean increased by five and the range remained the same.
 - 3) The mean remained the same and the range increased by five.
 - 4) The mean remained the same and the range remained the same.

- 2 Ms. Mosher recorded the math test scores of six students in the table below.

Student	Student Score
Andrew	72
John	80
George	85
Amber	93
Betty	78
Roberto	80

Determine the mean of the student scores, to the *nearest tenth*. Determine the median of the student scores. Describe the effect on the mean and the median if Ms. Mosher adds 5 bonus points to each of the six students' scores.

- 3 Given the following list of students' scores on a quiz:
5, 12, 7, 15, 20, 14, 7
Determine the median of these scores. Determine the mode of these scores. The teacher decides to adjust these scores by adding three points to each score. Explain the effect, if any, that this will have on the median and mode of these scores.

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Answer Section

1 ANS: 2 REF: 081327ia

2 ANS:
81.3, 80, both increase

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3 ANS:
12, 7. Both the median and the mode will increase.

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