

LEARNING CHECK

1. A distribution of scores has a mean = 30, median = 20, and mode = 10. The distribution

- a) has a positive skew.
- b) has a negative skew.
- c) is normal.
- d) is bimodal.

A: a

2. Explain your response to the previous question.

A: The mean is greater than the other two measures of central tendency because of a few high scores. These high scores are the unusual scores in the dataset, which makes the distribution *positively* skewed.

3. Seven friends have a mean income of \$300/week, and their median income is \$270/week. Rich, the lowest paid, gets fired from his \$200/week job and now has an income of \$0/week. What is the median weekly income of the seven friends after Rich lost his job?

A: The median is still \$270/week.

4. Explain your response to question 3.

A: Let's arrange these data (before Rich got fired) so that we have a mean of \$300 and a median of \$270. Here is one way to do so (but if you can do it another way, go for it; it won't change the logic behind this question):

\$500, \$350, \$300, \$270, \$240, \$240, \$200

The \$270 is the median because it divides the dataset in half, with three incomes above it and three incomes below it.

Now, with Rich being fired, here are the new incomes:

\$500, \$350, \$300, \$270, \$240, \$240, \$0

Here, the median is \$270 because it still divides the dataset in half.

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