

NAME: \_\_\_\_\_

## Which Measure of Center Best Describes the Data

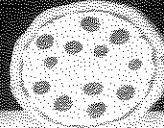
Find the measure of central tendency that best represents the data. Justify your selection and then find the measure of central tendency.

1. **STUDYING** The number of minutes spent studying are: 60, 70, 45, 60, 80, 35, and 45.

2. **COOKING** The table shows the required temperatures for different recipes.

- Identify the outlier in the data set.
- Determine how the outlier affects the mean, median, and mode of the data.
- Tell which measure of central tendency best describes the data with and without the outlier. Justify your selection.

dried fruit	175
cookies	300
brownies	325
lasagna	350
snack mix	350
buffalo wings	400
pizza	425
baked chips	450



Find the measure of central tendency that best represents the data. Justify your selection and then find the measure of central tendency.

3. **BASKETBALL** The number of points scored in a basketball tournament are 37, 47, 50, 44, 47, 38, 42, and 47.
4. **MUSIC** The number of songs downloaded per month by a group of friends were 8, 12, 6, 4, 2, 0, and 10.

Identify the outlier in the data set. Determine how the outlier affects the mean, median, and mode of the data. Then tell which measure of central tendency best describes the data with and without the outlier. Justify your selection.

5. **WEATHER** The table shows monthly rainfall in inches for five months.

Month	July	Aug	Sept	Oct	Nov
Rainfall (in.)	5.79	8.63	8.38	6.19	2.43

6. **FITNESS** The ages of participants in a relay race are 12, 15, 14, 13, 15, 12, 22, 16, and 11.

7. **LAKES** The table shows the average depth of several lakes.

Lake	Depth (ft)
Crater Lake	1,148
East Okoboji	10
Lake Gilead	43
Great Salt Lake	14

- a. Identify the outlier in the data set.
- b. Determine how the outlier affects the mean, median, mode, and range of the data.
- c. Tell which measure of central tendency best describes the data with and without the outlier.

8. **REASONING** Determine whether the following statement is *true* or *false*. If true, explain your reasoning. If false, give a counterexample.

*Of mean, median, and mode, the median will always be most affected by outliers.*

9. **CHALLENGE** Add three data values to the following data set so the mean increases by 10 and the median does not change.

42, 37, 32, 29, 20