

Mean, Median and Mode Activity

Name Solutions

1. Get a set of data cards for your group. Spread the numbers out and place them in order from smallest to largest. There are 9 numbers. When you are finished, write down your ordered list below:

11, 12.34, 15, 15.1, 16, 16, 16.5, 18, 19

2. Which number is the "middle" number? If you have an odd number of numbers, the middle number is called the **median**.

The median of this set is 16

3. Is there a most frequent number? If so, this number is called the **mode**.

The mode of this set is 16

4. What is the mean (average) of this set? You may use your calculator.

The mean of this set is 15.4 or 15.44

$$\frac{138.94}{9} = 15.437$$

5. Now, turn the numbers over, mix them up and remove one of the numbers. Turn the numbers over, put them in order (least to greatest) and write your list of numbers below:

What is the median of this set?

What is the mode of this set?

What is the mean of this set?

*— average the middle 2 numbers
answers will vary*

6. Data was collected on the number of hours slept by college students in a class of 9 people. The data is listed below:

6.0, 9.0, 4.5, 5.5, 6.0, 9.0, 7.0, 4.5, 5.75

Find the mean, median and mode of the data. You may use your calculator for the mean.

4.5, 4.5, 5.5, 5.75, 6, 6, 7, 9, 9

$$\text{mean} = \frac{57.25}{9} \approx 6.4 \text{ hours}$$

$$\text{median} = 6 \text{ hours}$$

$$\text{mode} = 4.5, 6, \text{ and } 9$$

7. Find the median of the fractions $\frac{5}{6}$, $\frac{11}{12}$, $\frac{7}{8}$, and $\frac{3}{4}$ following the directions below:

- a. Find common denominators for all of the fractions.

$$\text{LCD} = 24$$

$$\frac{5}{6} \cdot \frac{4}{4}, \quad \frac{11}{12} \cdot \frac{2}{2}, \quad \frac{7}{8} \cdot \frac{3}{3}, \quad \frac{3}{4} \cdot \frac{6}{6}$$

$$\frac{20}{24}, \quad \frac{22}{24}, \quad \frac{21}{24}, \quad \frac{18}{24}$$

- b. Order the fractions from smallest to largest.

$$\frac{18}{24}, \quad \left(\frac{20}{24}, \frac{21}{24} \right), \quad \frac{22}{24}$$

average

- c. Since there is an even number of numbers, the median is the average of the middle two numbers.

$$\frac{\frac{20}{24} + \frac{21}{24}}{2} = \frac{\frac{41}{24}}{2} = \frac{41}{48}$$

$$\left. \begin{array}{l} \frac{20.5}{24} \times 2 \\ \frac{41}{48} \end{array} \right\} = \frac{41}{48}$$