

Lesson One Practice Assignment  
Data, Frequency Tables and Histograms

- Can the mean, median, or mode have more than one value?
- Is the mean, median, or mode more affected by extreme values? Explain your reasoning.
- The incomes of a sample of 6 teachers in Calgary Alberta are as follows: \$41500, \$44900, \$39700, \$62300, \$58500, and \$53100. Find the mean, median and mode income of the six teachers.
- The following table gives the frequency distribution of the number of orders received each day during the past 50 days at the office of a publishing company in Regina. Calculate the mean, median, and mode algebraically.

Number of orders	Number of days
10 – 12	7
13 – 15	12
16 – 18	17
19 – 21	14

- The mean score of 18 female students on a math test is 72 and the mean score of 14 male students is 66. Find the combined mean score for all students.
- A small business has 10 people on their payroll. Eight workers make \$50000 a year, 1 foreman makes \$80000 per year, and 1 owner makes \$880000 per year. Determine the mean, median, and mode for these 10 people. If you were the owner, which measure of central tendency would you prefer to use in wage bargaining. Explain. If you were the workers, which measure of central tendency would you prefer to use in wage bargaining. Explain.
- If the mean of 50 numbers is 18 and the mean of the first 30 of those 50 numbers is 16, what is the mean of the last 20 numbers?
- The mean of 50 numbers is 38. If two of the numbers, namely 45 and 55 are removed, what is the mean of the remaining numbers?

**ANSWERS**

- Mode
- Mean. Extremely large or small values will have the greatest impact on the mean as the mean uses all the values in its calculation. The median only uses the middle term in ranked order or the terms, and the mode is the most frequently occurring number.
- 3a. Mean → \$50000  
3b. Median → \$49000  
3c. Mode → All incomes are different, therefore no mode.
- 4a. Mean → 16.28      5. Mean → 69.4  
4b. Median → 17  
4c. Mode → 17
- 6a. Mean → \$136000    Median → \$50000    Mode → \$50000  
6b. As the owner I would use the mean, as it shows that the average wage is \$16000.  
6c. As the workers I would use the median or the mode, as both show that the wages are \$50000.
- Mean → 21
- Mean → 37.5