

- Measures of position can measure the locational point, or value of a percentile, decile, or quartile. The median is the 50th percentile.

- The formula to find the location is:
$$L_p = (n + 1) \frac{P}{100}$$

- To find the value associated with the location:
 - First, we find the location with the above formula.
 - If the position is not a whole number, take location 5.8 for example
 - Round down to the next whole number, 5.8 become 5.
 - Take the value at location 5 and add 80% of the difference between the values at location 5 and location 6.

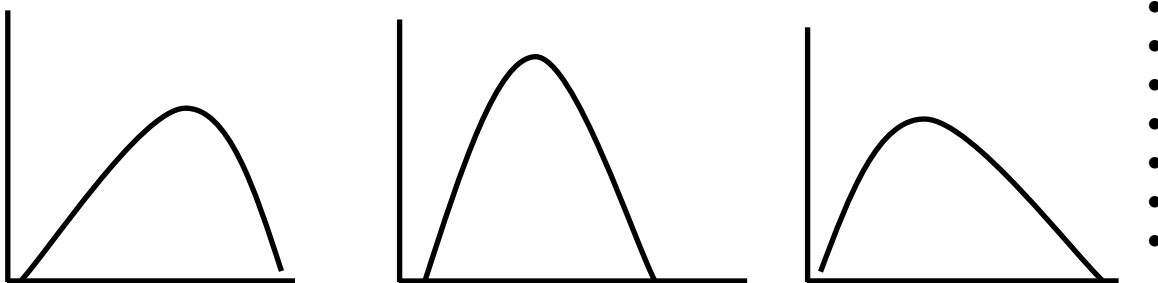
$$\text{Value at 5} + .8(\text{Value at 6} - \text{Value at 5}) = \text{Value at location 5.8}$$

- Skewness is a measure of how far the data deviates from a normal distribution (perfectly normal curve). It can be calculated with Pearson's coefficient of skewness or with the equation used by software programs like Excel.

- Pearson's coefficient of skewness:
$$\frac{3(\bar{x} - \text{Median})}{s}$$

- Software skewness computation:
$$\frac{n}{(n - 1)(n - 2)} \sum \left(\frac{x - \bar{x}}{s} \right)^3$$

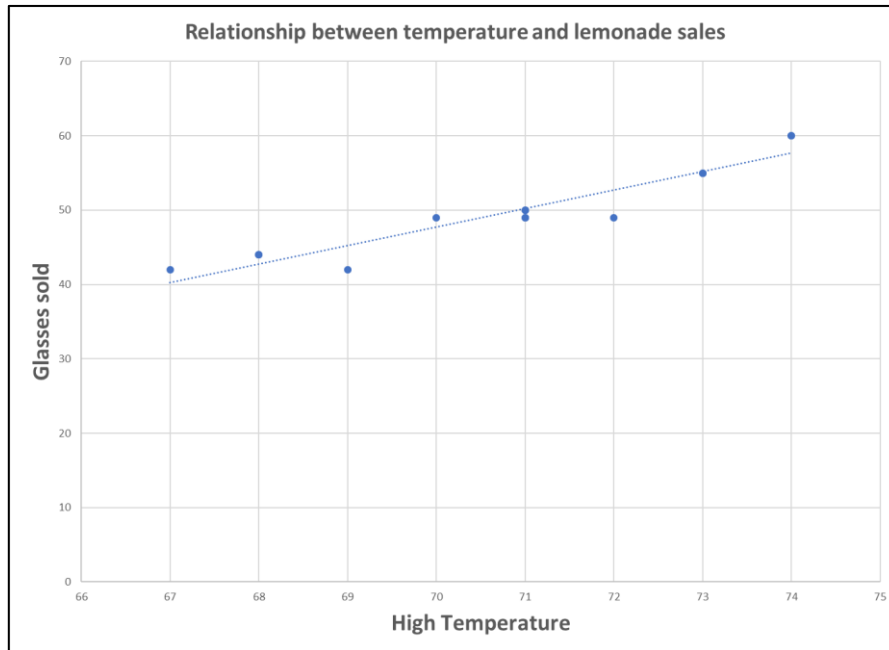
- You can easily compute skewness in Excel with its Skew() function.



Business Statistics/Statistical Methods

Chapter 4 Highlights – Position-Skewness-Scatterplots

- A scatterplot is a visual representation of the relationship between two variables.





Business Statistics/Statistical Methods

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