= key words

Definitions of Statistics chapters (10 13 4)

Chapter 10 & 13

- **Scatter plot:** is a graph of the ordered pairs (x, y) of numbers consisting of the independent variable x and the dependent variable y.
- **Population correlation coefficient:** denoted by p is the correlation computed by using all possible pairs of data values (x,y) taken from a population.
- **Linear correlation coefficient:** denoted by r computed from the sample data measures the strength and direction of a linear relationship between two quantitative variables.
- **Correlation and Regression:** are inferential statistics involves determining whether a relationship between two or more numerical or quantitative variables exists.
- **Correlation:** is a statistical method used to determine whether a linear relationship between variables exists.
- **Regression:** is a statistical method used to describe the nature of the relationship between variables— that is, positive or negative, linear or nonlinear.
- **Positive relationship:** exists when both variables increase or decrease at the same time.
- **Negative relationship**: as one variable increases, the other variable decreases and vice versa.
- **Spearman rank correlation coefficient:** is a non-parametric coefficient and can be used when the data are ranked.
- **The regression line:** aims to find a line of best fit to the data**.**

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= key words

- **Best fit**: means that the sum of the squares of the vertical distance from each point to the line is at a minimum.

Chapter 4

- **Probability:** the chance of an event occurring
- **Probability Experiment:** is chance process that leads to a well-defined results called outcomes
- **Sample space:** is the set of all possible outcomes
- **Tree diagram:** is advice consisting of line segments emanating from a starting point it is used to determine all possible outcomes of a probability experiment
- **Event:** consist of a set of outcomes of a probability experiment
- **Classical probability:** uses sample spaces to determine the numerical probability that an event will happen
- **Classical probability:** assumes that all outcomes in the sample space are equally likely to occur
- **Equally likely events:** are events that have the same probability of occurring
- **The complement of an event:** E is the set of outcomes in the sample space that are not included in the outcomes of E the complement of E is denoted by $\bar{E}$
- **Empirical probability**: relies on actual experience to determine the likelihood of outcomes
- **Subjective probability**: uses probability value based on an educated guess or estimate, employing opinions and inexact information .

- **Mutually exclusive events (disjoint events)**: events cannot occur at the same time (they have no outcomes in common) .
- **Multiplication Rules**: can be used to find the probability of two or more events that occur in sequence

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= key words

- **Independent events**: two events A and B if the fact that A occurs does not affect the probability of B occurring
- **Dependent events**: when the outcome or occurrence of the first event affects the outcome or occurrence of the second event in such a way that the probability is change .
- **Permutations**: is an arrangement of n objects in a specific order
- **Combination**: is a selection of distance objects without regard to order .

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