**DATA INFORMATION (HISTOGRAM)**

A histogram is often used for representing data from a continuous variable which are summarized as a grouped frequency distribution.

We use Excel to generate a Box to represents both the original and the corrected sets of data. The result is the following diagram:

The different methods of diagrammatic representation of statistical data are bar chat, histogram, steam and leaf, and line plots. The bar chart is more appropriate to data from a discrete distribution that are summarized using a frequency distribution. A histogram is often used for representing data from a continuous variable which are summarized as a grouped frequency distribution. A histogram is therefore similar to a bar chat, but is used to present continuous data. Steam and leaf gives a visual representation similar to the histogram but has the advantage that it does not lose the detail of the individual data point in the grouping. All these diagrams serve to examine the general shape of the distribution of data and help in making conjecture about values of quantities such as the median, the mean or the interquartile range. The last one, the line plot, is often appropriate for smaller data sets, and can be useful for example to check whether toe data sets have a common variance.

We denote by and the mean of the original set and the corrected set respectively.

Since we have an even number of observation, the median in this case will be the midpoint of the two middle observations. That’s: For the original set the median is; for the corrected set the median is.

The standard deviation of each data set is given by, where, are the different values in each data set. Hence: For the original set, and for the corrected set.

The lower quartile is defined to be the observation counting from below, and the upper quartile is the same but counting from above. The interquartile is simply the difference between the upper and the lower quartile. We have the results in the following table.

Question 2

Theoretically, the fact that 9 and 12 can be made up in as many ways as 10 and eleven 11 means that both sets of numbers should have the same probability to appear. The first thing that should be noted here is the fact that this is true if and only if when we throw a dice, all the numbers have the same probability of appearance, which if not always the case in practice when if when we need to allow consideration such as the on uniformity of the surface on which the dice is thrown, the angle and the velocity at which the is thrown, and even any deformation on the dice which all have an effect on the number that we will get. This problem thus highlights the impossibility of the probability to be an absolutely precise science as oppose to the other branches of mathematics.

The probability that a film processed on machine X is. Also, the quality of a film is independent of the quality of all the films processed before it. Thus the probability that three films randomly chosen from a batch coming from machine X is simply.

Let’s denote by the event “the batch came from machine X”, the event “the three film are all of good quality”. Clearly, what we are asking for is the probability that and occur at the same time, which is the probability that the three films are all of good quality and the batch came from machine X. Using the theory of conditional probabilities, we have:

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Since all of all films are processed on machine X, then. Is simply the probability the probability that we calculated above. Thus. Hence: At each question only two things can happen:

1-the student can answer the correctly, and we denote by the probability that this does happen;

2-or the student can choose the wrong outcomes among the five possible, and we denote by the probability that this does happen.

Obviously we must have. Given that only five outcomes are available at each question, only one of which being correct.

The experiment that consists in answering a single question can therefore be viewed as a Bernoulli experiment with parameter. Hence, Taking all the multiple-choice examination can be viewed as Binomial experiment with parameter, where. Let’s be the random variable representing the number of correct answer achieved by the student. Clearly, the distribution of Binomial with parameter. The probability that the student passes the test is the, which is equivalent to. But:

Finally, the Brooks articles gave me a knowledgeable on data and how it can be used from the human prospective to produce finish product. Data is a raw materials that needs human intelligent to product good result as compare to the scenario that Brook's gave us from the Economy from Italy when a chief executive applied his intelligent during crisis because he don't want the world to take him as coward executive.

I am pleased to further more studies in statistics for real decision making as compare to the histogram above where I will be able to analysis problem for myself.

Thanks!

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