**Practical no 1**

Aim: To use Bayes’ theorem in probability and to find covariance and correlation of random variables

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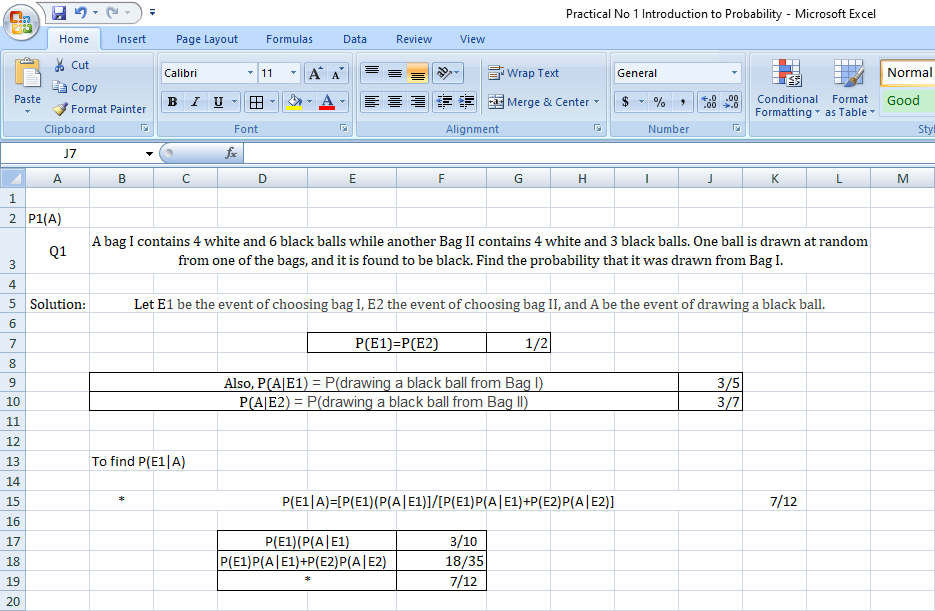
Class: F.Y. Data Science

Sub: Probability and distributions

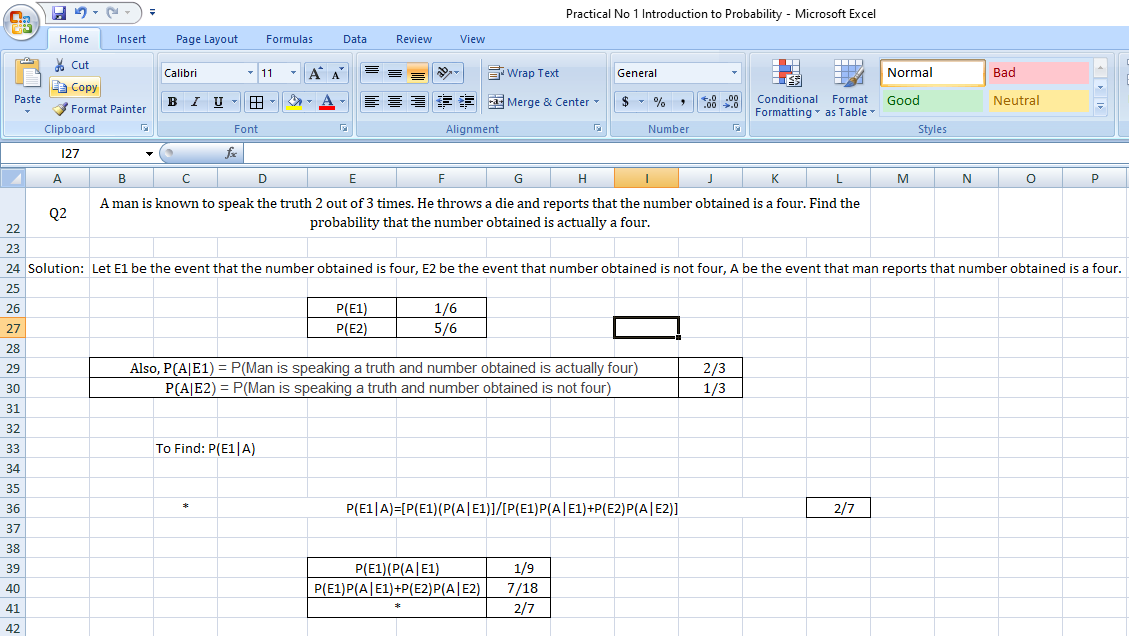
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**A)** **Formulate and apply Bayes’ Theorem Calculations for problems like The “Two-Supplier Example”. [Hint: Use Prior Probabilities and Conditional Probabilities to computeJoint and PosteriorProbabilities.]**

Q1. A bag I contains 4 white and 6 black balls while another Bag II contains 4 white and 3 black balls. One ball is drawn at random from one of the bags, and it is found to be black. Find the probability that it was drawn from Bag I.

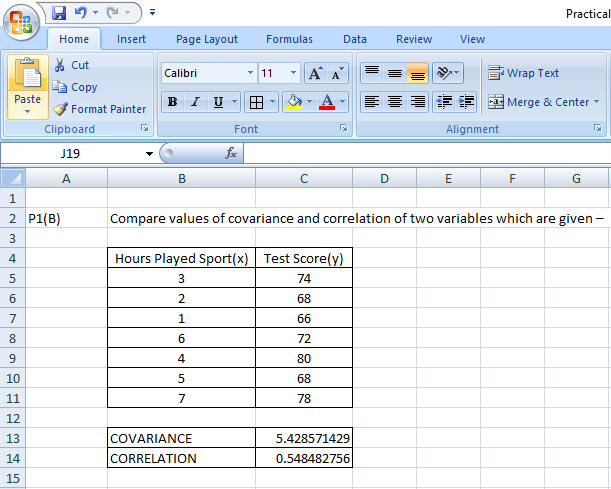
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Q.2 A man is known to speak the truth 2 out of 3 times. He throws a die and reports that the number obtained is a four. Find the probability that the number obtained is actually a four.

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**B)** **Design spreadsheet to demonstrate the association Between Two Variables by Computing the Covariance and Correlation Coefficient.**

**[Hint: Use COVAR and CORREL)]**

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