DSML Module Test Reattempt: Data Analytics and Visualisation - Probability and Stats – Test 2

Statistics

female population
In a college where the female population is 45%, what is the probability that in a class of 40, there are exactly 20 girls?

0.102 0.035 0.318 0.422

Probability
Boxes and Apples
I have two boxes of apples and oranges. In box 1, there are 5 oranges and 6 apples, in box 2 there are 6 oranges and 5 apples. I randomly pick a box and then in this box randomly pick a fruit. What is the probability that I picked box 1 given that I picked an apple?

6/11 5/13 7/23 5/18

Probability

Red Marbles

I have three bags that each contain 100 marbles:
Bag 1 has 75 red and 25 blue marbles; Bag 2 has 60 red and 40 blue marbles; Bag 3 has 45 red and 55 blue marbles.
I randomly choose one of the bags and then randomly pick a marble from the chosen bag.
What is the probability that the chosen marble is red?

0.50 **0.60** 0.70 0.85

Probability

Basketball Player

A basketball player has a free-throw success rate of 80%. If he attempts 10 free-throws, what is the probability that he makes exactly 8 of them?

0.144 0.222 0.576 **0.301** 0.602

Miscellaneous

Pencil Sales

The weekly pencil sales at a particular retail store is seen to follow a Gaussian distribution with mean 700 and standard deviation 100. What is the probability that the total number of sales is greater than 850?

0.03 **0.06** 0.09 0.12 0.16

Probability

Blood pressure

The blood pressure was seen to follow Gaussian distribution with mean 120 and standard deviation 20. What is the probability that a person has BP within 130 and 140?

0.27 0.36 0.45 0.34 **0.14**

Probability

Lifts in working days

What is the probability that among the mornings of the 5 working days in a week, I will get a lift in more than 3 mornings.Note that the Probability of getting a lift on any working day morning is 0.7

0.64 0.47 0.68 **0.53**

Probability

Z-Score dillema ?

What do you understand by Z-score ?

Select correct statement :

- Z-score is percentage of standard deviation away a value is from the overall mean
- Z-score is ratio of standard deviation and population mean
- **Z-score is number of standard deviation away a value is from the overall mean**
- Z-score is numerical quantity which tells us how the population is sampled

Probability

Ticket number 1-20

Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

1/2 2/5 8/15 **9/20**

Probability

Defective screws 2

The chances of a defective screw in three boxes A, B, C are 1/5,1/6 and 1/7 respectively. One of the boxes is selected at random and a screw drawn from it at random is found to be defective. Find the probability that it came from box A.

42/107 41/107 40/107 43/107