Statistics

Answer 1 :-  The correlation coefficient of 0.7 indicates a strong relationship between SAT score and college GPA. The closer the correlation coefficient is to 1, the stronger the positive relationship.

Answer 4 :-

Since there are 20 slips of paper in the hat, each with a unique number between 1 and 20 so the total number of possible outcomes are 20.

The perfect square numbers between 1 to 20 are 1, 4, 9, and 16. So there are four favorable outcomes.

Therefore the probability of drawing a perfect square number is given by.

Prob = = =

Answer 5 :-

To calculate the probability that a randomly selected late taxi belongs to company A we use Bayes Theorem.

A: Taxi belongs to Company A

B: Taxi belongs to Company B

L: Taxi is late

We want to find P(A|L), which is the probability that a taxi belongs to Company A given that it is late.

According to the problem statement:

P(A) = 0.8 (Company A has 80% of the taxis)

P(B) = 0.2 (Company B has 20% of the taxis)

P(L|A) = 0.05 (Company A's taxis have a 95% success rate, so the probability of being late is 1 - 0.95 = 0.05)

P(L|B) = 0.1 (Company B's taxis have a 90% success rate, so the probability of being late is 1 - 0.90 = 0.1)

Using Bayes' theorem:

P(A/L) = = = = 0.67

Eg. Answer. 6 Python - > GitHub repo link