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5. Section 2: Probability and Statistics

Sansa is trying to find the "true one", but that's not easy. She had decided to go on a date with at most 100 men (the "true one" is the best among them and each have equal probability of being the true one). She can only date someone after breaking up with previous one and cannot go back to the one she had already broken up with. So, she has decided a strategy - since she does not know anything about men, she would like to know how men in general are by dating first n men. Then whoever she finds better than all the previous men, she would marry him. What is the value of n , such that the probability of marrying the true one is maximized?

Pick **ONE** option

☐ 25☐ 37☐ 50☐ 67

Clear Selection

6. Section 2: Probability and Statistics

Find the sum of all four-digit numbers that can be formed by the digits 1, 3, 5, 7, 9 without repetition.

Pick **ONE** option

☐ 666700☐ 666600☐ 678860☐ 665500

Clear Selection

7. Section 2: Probability and Statistics

Let A and B be two events such that the occurrence of A implies occurrence of B, but not vice-versa, then the correct relation between $P(A)$ and $P(B)$ is?

Pick **ONE** option

☐ $P(A) < P(B)$ ☐ $P(B) \geq P(A)$ ☐ $P(A) = P(B)$ ☐ $P(A) \geq P(B)$

Clear Selection

8. Section 2: Probability and Statistics

A show called Andheri Idol is hosted by three celebrities – Sattu Nigam, Sumedha Ghoshal and Anshul Malik. A candidate who auditions if performs well has different probabilities of being selected by different celebrities. Sattu and Sumedha select him with probability a of p and Anshul instead trusts a fair coin more than himself and uses it to make his decision. The format of the show says that the candidate will be selected if majority of votes i.e. 2 out of 3 are in his favor.

There is another committee hosted by a celebrity called Shehad Singh of which he is the only member and selected this candidate with a probability p . If the probability that this candidate will get selected is P_1 with first committee and P_2 with the second committee which of the following is true?

Pick **ONE** option

☐ $P1 > P2$

☐ $P1 < P2$

☐ $P1 = P2$

☐ Can't Say

Clear Selection

Continue