

Q1: A Survey conducted by a bank revealed that 40% of the accounts are savings accounts and 35% of the accounts are current accounts and the balance are loan accounts.

- **What is the probability that an account taken at random is a loan account?**

Answer: 0.25

Timestamp: 1 hour 53 minutes 10 seconds

Reasoning: Loan accounts make up 25% of all accounts (since 40% are savings and 35% are current accounts, so 25% is the remainder).

- **What is the probability that an account taken at random is NOT a savings account?**

Answer: 0.60

Timestamp: 1 hour 53 minutes 15 seconds

Reasoning: Since 40% are savings accounts, the probability that an account is NOT a savings account is $1 - 0.40 = 0.60$.

- **What is the probability that an account taken at random is NOT a current account?**

Answer: 0.65

Timestamp: 1 hour 53 minutes 20 seconds

Reasoning: Since 35% are current accounts, the probability that an account is NOT a current account is $1 - 0.35 = 0.65$.

- **What is the probability that an account taken at random is either a current account or a loan account?**

Answer: 0.60

Timestamp: 1 hour 53 minutes 25 seconds

Reasoning: Since 35% are current accounts and 25% are loan accounts, the total probability for either event (current or loan) is $0.35 + 0.25 = 0.60$.

Q2: If two dice are thrown, what is the probability that the sum is:

- **Greater than 8?**

Answer: 0.25

Timestamp: 1 hour 52 minutes 50 seconds

Reasoning: The number of outcomes where the sum is greater than 8 is 15, so the probability is $15/36 = 0.25$.

- **Less than 6?**

Answer: 0.11

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Reasoning: The number of outcomes where the sum is less than 6 is 10, so the probability is $10/36 = 0.11$.

- **Neither 7 nor 11?**

Answer: 0.78

Timestamp: 1 hour 53 minutes 0 seconds

Reasoning: The probability that the sum is neither 7 nor 11 is $1 - (P(7) + P(11)) = 1 - (6/36 + 2/36) = 28/36 = 7/9$.

Q3: A committee of 5 is chosen from a group of 8 men and 4 women. What is the probability that the group contains a majority of women?

- **Answer:**

Permissible configurations: 1 man and 4 women, or 2 men and 3 women.

The calculations involve using combinations for the different scenarios, as shown in the handout:

$$P(1M \text{ and } 4W) = \frac{C(8, 1) \times C(4, 4)}{C(12, 5)}$$

$$P(2M \text{ and } 3W) = \frac{C(8, 2) \times C(4, 3)}{C(12, 5)}$$

The total probability is the sum of the individual probabilities.

Answer: 5/33

Timestamp: 1 hour 53 minutes 5 seconds

Q4: A committee of 5 is chosen from a group of 8 men and 4 women.

- **What is the probability that both selected setups are for laptop computers? Answer:** 0.10 (approx.)

Timestamp: 1 hour 52 minutes 30 seconds

- **What is the probability that both selected setups are desktop machines? Answer: 0.25**
Timestamp: 1 hour 52 minutes 35 seconds
 - **What is the probability that at least one selected setup is for a desktop computer? Answer: 0.40**
Timestamp: 1 hour 52 minutes 40 seconds
 - **What is the probability that at least one computer of each type is chosen for setup? Answer: 0.50**
Timestamp: 1 hour 52 minutes 45 seconds
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Conclusion:

The session provided valuable insights into basic probability concepts and their application. With examples like rolling dice, selecting committee members, and analyzing survey results, students were able to strengthen their understanding of probability, especially in relation to real-world scenarios. These exercises allow for critical thinking and demonstrate how statistical methods can be directly applied to solve practical problems.