



Probability Questions PDF with Detailed Solutions

Probability questions are a type of questions that can provide you valuable marks in competitive exams. These questions carry a weightage of 1-2 questions(2-4 marks) in SSC exams and 1-2 questions(1-2 marks) in bank exams. To perform well in competitive exams, you should clear your concepts of probability and have a good practice as there are a variety of questions.

Here are some tips for solving Probability questions: Understand basics of various concepts like dice, coin, cards etc. You should have a good hold on concepts of permutation and combinations, read carefully the question and evaluate all the possibilities.

So, we have attached 10 questions of Probability for you to practice with. You should aim to solve these questions in less than half a minute for each.

Practice Questions on Probability

You can also download the Probability questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

Q:1 Two numbers are selected from the set of first six natural numbers. What is the probability that their difference is 1?

1. $1/2$
2. $1/3$
3. $1/4$
4. $1/5$

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) This was an easy one, isn't it?

Q:2 What is the probability of choosing two vowels from the word POLYMER?

1. 1
2. $2/7$
3. $3/7$
4. $4/7$

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Sharpen your concepts to solve such questions...

Q:3 A and B agree to play 6 games of pool. Assume that the probability of A winning a game is p where p is fixed and $0 < p < 1$. If the probability that A wins 4 games out of 6 games is equal to the probability that he wins 5 games out of 6 games, then what will be the ratio of the probability that he wins 2 games out of 6 games to the probability that he wins 3 out of 6 games?



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1. $1/5$
2. $3/10$
3. $9/20$
4. $1/2$

(**Difficulty: 4, Estimated Time: 25 Seconds**) This was a tough one....

Q:4 If a two-digit number is chosen at random, what is the probability that the number chosen is either a prime number or the sum of its digits is 3?

1. $4/15$
2. $14/15$
3. $29/30$
4. $7/10$

(**Difficulty: 3, Estimated Time: 20 Seconds**) This is a common type asked in exams..

Q:5 A lucky draw contains a box with all-natural numbers from 1 to 100. Two-digit numbers with the same digits in both places are considered lucky. What is the probability that one will get lucky?

1. $1/10$
2. $1/100$
3. $9/40$
4. $9/100$

(**Difficulty: 3, Estimated Time: 20 Seconds**) We're halfway through. Have you got all your questions correct so far?

Q:6 It is given that the probability of getting an odd number 2 times is equal to the probability of getting an even number 3 times on a dice. Find the probability of getting an even number for even number of times.

1. $3/16$
2. $15/32$
3. $1/32$
4. $5/16$

(**Difficulty: 3, Estimated Time: 25 Seconds**) You cannot tackle such questions if your concepts are not up to the mark....

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Q:7 A tampered dice which has a probability of showing an even number is twice the probability of showing an odd number. Two such dice are rolled. What is the probability that the sum of the numbers shown by the dice is even?

1. $4/9$
2. $5/6$
3. $5/9$
4. $2/3$

(**Difficulty: 4, Estimated Time: 25 Seconds**) This was a bit hard. Did you get it right?

Q:8 In a deck containing 7 cards, each numbered from 1 to 7, the cards are shuffled. Subsequently, two cards are drawn sequentially from the deck. What is the probability that the first card's number is smaller than the number on the second card?

1. $1/5$
2. $4/21$
3. $1/7$
4. $2/5$

(**Difficulty: 3, Estimated Time: 20 Seconds**) This was not an easy one...be prepared for such questions

Q:9 Seven chits are numbered 1 to 7. Three are drawn one by one with replacement. The probability that the least number on any selected chit is 5, is

1. $1 - \left(\frac{2}{7}\right)^4$
2. $4 \left(\frac{2}{7}\right)^4$
3. $\left(\frac{3}{7}\right)^3$
4. None of these

(**Difficulty: 3, Estimated Time: 20 Seconds**) This is a similar one like you have solved....

Q:10 The probability of Rachel being found guilty is $1/4$ and the probability of Ross being found guilty is $2/5$. Find the probability that either of them is found guilty.

1. $\frac{1}{20}$

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4. $\frac{19}{20}$

(Difficulty: 2, Estimated Time: 15 Seconds) Did you guess them all correctly?

Answer Key

Let's check out your score in this test.

1. (2)	2. (2)	3. (2)	4. (1)	5. (4)
6. (2)	7. (3)	8. (3)	9. (3)	10. (2)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

Answers and Solutions

Q:1 The correct answer is **option 2** i.e. $\frac{1}{3}$

Total number of ways two numbers can be taken from the set = $6 \times 5 = 30$

[∵ Initially 6 choices, after a number is taken, 5 choices left]

Occurrences in which the chosen numbers have difference of 1

(1, 2), (2, 1)

(2, 3), (3, 2)

(3, 4), (4, 3)

(4, 5), (5, 4)

(5, 6), (6, 5)

Number of ways = 10

Required probability = $\frac{10}{30} = \frac{1}{3}$

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Q:2 The correct answer is **option 2** i.e. **2/7**.

Probability = possible incident/total incident

Vowels = 2 and, total letter = 7

Hence,

Probability = 2/7

Q:3 The correct answer is **Option 2** i.e. **3/10**.

As given in the question,

$$\Rightarrow {}^6C_4 p^4(1-p)^2 = {}^6C_5 p^5(1-p)$$

$$\Rightarrow 15(1-p) = 6p$$

$$\therefore \frac{1-p}{p} = \frac{2}{5}$$

Now,

$$\Rightarrow \frac{{}^6C_2 p^2(1-p)^4}{{}^6C_3 p^3(1-p)^3} = \frac{15}{20} \times \frac{(1-p)}{p} = \frac{3}{4} \times \frac{2}{5} = \frac{3}{10}$$

Q:4 The correct answer is **Option 1** i.e. **4/15**.

The number which is divisible by itself and 1 is called a prime number.

The number which is not a prime is called non - prime number.

There are total 90 positive two-digit numbers starting from 10 to 99 in which 21 numbers are prime numbers and 69 are non-prime numbers.

Total number of trials = 90

Total number of trials of getting a prime number = 21

So, Probability of getting a prime number = 21/90 = 7/30

Numbers from 10 to 99 whose sum of digits is 3 = 12, 21, 30 and neither of them is prime

Probability of getting a number whose sum of digits is 3 = 3/90 = 1/30

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Probability that the number chosen is either a prime number or the sum of its digits is $3 = 7/30 + 1/30 = 4/15$

Q:5 The correct answer is **option 4** i.e. **9/100**.

Number of lucky numbers = 9(11, 22, 33, 44, 55, 66, 77, 88, 99)

Total number of observations = 100

The probability that he will get lucky = $9/100 = 0.09$

Q:6 The correct answer is **option 2** i.e. **15/32**.

Probability of getting an odd number on a dice = $1/2$

Probability of getting an odd number on a dice two times in let say 'n' throws = ${}^n C_2 (1/2)^2 (1/2)^{n-2}$

Probability of getting an even number on a dice = $1/2$

Probability of getting an odd number on a dice two times in let say 'n' throws = ${}^n C_3 (1/2)^3 (1/2)^{n-3}$

As both are equal, ${}^n C_2 (1/2)^2 (1/2)^{n-2} = {}^n C_3 (1/2)^3 (1/2)^{n-3}$

$$\Rightarrow \frac{n!}{2!(n-2)!} = \frac{n!}{3!(n-3)!}$$

$$\Rightarrow n - 2 = 3$$

$$\Rightarrow n = 5$$

Now the probability of getting an even number for even number of times is

$$\Rightarrow ({}^5 C_2 + {}^5 C_4) \times 1/2^5$$

$$\Rightarrow (10 + 5)/2^5 = 15/32$$

Q:7 The correct answer is **Option 3** i.e. **5/9**.

$$P(\text{even number}) + P(\text{odd number}) = 1$$

$$P(\text{even number}) = 2 \times P(\text{odd number})$$

$$\Rightarrow 3 \times P(\text{odd number}) = 1$$

$$\therefore P(\text{even number}) = 2/3$$

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To get the sum as an even number. Both of the dice should show an even number or odd number

$P(\text{both even}) + P(\text{both odd})$

$$\Rightarrow (2/3)^2 + (1/3)^2$$

$$\Rightarrow 5/9$$

Q:8 The correct answer is **option 3** i.e. **1/7**

The five cards are {1, 2, 3, 4, 5}

Sample space = 7×6 ordered pairs.

$P(\text{1st card} = \text{11th card} - 1)$

$$= P\{(1, 2), (2, 3), (3, 4), (4, 5), (5, 6), (6, 7)\}$$

$$= \frac{6}{7 \times 6} = \frac{1}{7}$$

Q:9 The correct answer is **option 3** i.e. $(\frac{3}{7})^3$

$P(5 \text{ or } 6 \text{ or } 7) \text{ in one draw} = 3/7$

\therefore Probability that in each of 3 draws, the chits bear 5 or 6 or 7 = $(\frac{3}{7})^3$.

Q:10 The correct answer is **option 2** i.e. **13/20**.

Probability of Rachel being found guilty = $1/4 = P(A)$

Probability of Ross being found guilty = $2/5 = P(B)$

$$\text{Probability that either of them is found guilty} = P(A \cup B) = P(A) + P(B) = \frac{1}{4} + \frac{2}{5} = \frac{13}{20}$$

{Since events are mutually exclusive, so $P(A \cap B) = 0$ }