

## Probability

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<http://gonitsora.com/probability/>

1)  $x_1, x_2, x_3, \dots, x_{50}$  are fifty real numbers such that  $x_r < x_{r+1}$  for  $r = 1, 2, 3, \dots, 49$ . Five numbers out of these are picked up at random. The probability that the five numbers have  $x_{20}$  as the middle is: [Asked in "IIFT"]

A)  $\frac{{}^{20}C_2 \times {}^{30}C_2}{{}^{50}C_3}$

B)  $\frac{{}^{30}C_2 \times {}^{19}C_2}{{}^{50}C_5}$

C)  $\frac{{}^{19}C_2 \times {}^{31}C_2}{{}^{50}C_5}$

D) None of these

2) Steel Express stops at six stations between Howrah and Jamshedpur. Five passengers board at Howrah. Each passenger can get down at any station till Jamshedpur. The probability that at five persons will get down at different station is: [Asked in "XAT"]

A)  $\frac{{}^6P_5}{6^5}$

B)  $\frac{{}^6C_5}{6^5}$

C)  $\frac{{}^7P_5}{7^5}$

D)  $\frac{{}^7C_5}{7^5}$

E) None of the above

3) A five digit number is formed by using the digits 1, 2, 3, 4 and 5 without repetitions. What is the probability that the number is divisible by 4? [Asked in "XAT"]

A)  $1/5$

B)  $5/6$

C)  $4/5$

D) None of these

4) A five digit number is formed by using the digits 1, 2, 3, 4 and 5. What is the probability that the number is divisible by 4?

A)  $\frac{1}{5}$

B)  $\frac{24}{5^5}$

C)  $\frac{6}{5^4}$

D) None of these

5) A three digit number is formed by using the digits 2, 3, 4, and 5 without repetitions. What is the probability that the number is divisible by 12?

A)  $\frac{1}{5^3}$

B)  $\frac{1}{12}$

C)  $\frac{5}{12}$

D)  $\frac{1}{6}$

Image Source : [Shutterstock](#)

6) Which of the following numbers can be a probability?

A) -0.00002

B)  $\frac{5}{2}$

C) 1.002

D)  $2^2$

E)  $\frac{25}{4}$

F) 23%

7) What is the probability that a two digit number selected at random will be a multiple of '3' and not a multiple of '5'?

A)  $\frac{2}{15}$  B)  $\frac{4}{15}$  C)  $\frac{1}{15}$  D)  $\frac{4}{90}$

(Hint:-  $90=3 \cdot 30$ ,  $90=15 \cdot 6$ )

8) A number is selected at random from first fifty natural numbers. What is the chance that it is a multiple of either 3 or 12?

A)  $\frac{8}{25}$  B)  $\frac{2}{25}$  C)  $\frac{6}{25}$  D)  $\frac{2}{5}$

(Hint:-  $50=3 \cdot 16+2$  and 12 is divisible by 3.)

9)  $x+y=35$ , where x and y both are natural numbers. What is the probability of getting both x and y are divisible by 3?

A) 0 B) 1 C)  $\frac{5}{17}$  D)  $\frac{3}{17}$

(Hint:- 35 is not divisible by 3.)

10) Sum of digits of a 4 digit number is 34. Find the probability that such a number is even.

A)  $\frac{1}{12}$  B)  $\frac{1}{4}$  C)  $\frac{1}{2}$  D)  $\frac{1}{6}$

(Hint:-  $34=9 \cdot 4-2$ )

**Answers:**

1) B 2) C 3) A 4) A 5) B 6) F 7) B 8) A 9) A 10) A

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