



## **MATHS**

## BOOKS - CALCUTTA BOOK HOUSE MATHS (BENGALI ENGLISH)

## **PROBABILITY**

Examples

1. If E be the random experiment of throwing an unbiased coin and S be its sample space

and if H and T denotes the events of occurrence of head and tail respectively, then If one coin is thrown, then find the sample space of E.



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2. If E be the random experiment of throwing an unbiased coin and S be its sample space and if H and T denotes the events of occurrence of head and tail respectively, then If two coins are thrown simultaneously or one

coin is thrown two times, then find the sample space of E.



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**3.** If E be the random experiment of throwing an unbiased coin and S be its sample space and if H and T denotes the events of occurrence of head and tail respectively, then If three coins are thrown simultaneously or one coin is thrown three times, then find the sample space of E.



**4.** If E be a random experiment or rolling a dice and S be its sample space, then if one dice is rolled then find the sample space of it.



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**5.** If E be a random experiment or rolling a dice and S be its sample space, then if one dice is rolled

If two dice are rolled, find the sample space.

**6.** If E be a random experiment of counting the number of telephone calls in a telephone line after regular period of time and if S be its sample space, then



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7. Let the heights of a group of students are more than 4 feet and less than 6 feet. Now if E

be the random experiment of measuring the heights of the students and if S be the sample space then.



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Exercise 2

**1.** Define with examples :

Event.



2. Define with examples:

Complementary event.



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3. Define with examples:

Event point and sample space.



4. Define with examples:

Impossible event.



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**5.** Define with examples :

Sure event.



**6.** Define with examples :

Mutually exclusive events.



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7. State the classical definition of probability.



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**8.** Write the sample space in each of the following:

An unbiased coin is tossed one time.



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**9.** Write the sample space in each of the following:

An unbiased coin is tossed two times.



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**10.** Write the sample space in each of the following:

An unbiased coin is tossed three times.



**11.** If two coins are simultaneously tossed, then find the probability of occuring two heads.



12. X and Y are two events in the sample space

S such that

$$P(X) = \frac{3}{4}, P(Y) = \frac{5}{8} \text{ and } P(X \cap Y) = \frac{1}{2}$$

Then find

$$P(X \cup Y)$$



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13. X and Y are two events in the sample space

S that such

$$P(X) = \frac{3}{4}, P(Y) = \frac{5}{8} \text{ and } P(X \cap Y) = \frac{1}{2}$$

. Then find



 $P(X^c)$ .

**14.** Two unbiased coins are tossed one time. Find the probability of occuring two tails?



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**15.** An unbiased dice is rolled one time. Find the probability of occuring 4.



**16.** The probabilities of solving mathematical problem by Gopal, and Kesto are  $\frac{1}{3}$  and  $\frac{1}{4}$  respectively. Find the probability of not solving the problem.

