

**PROBABILITY**

**CM111401**

- Two unbiased dice are thrown. Find the probability that the total of the numbers on the dice is greater than 10.
- A card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is:  
(i) either a black card or a king      (ii) spade or an ace      (iii) not an ace
- From a deck of 52 cards, four cards are drawn simultaneously, find the chance that they will be the four honours of the same suit.
- Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is probability that the ticket has a number which is a multiple of 3 or 7?
- A bag contains 7 white, 5 black and 4 red balls. If two balls are drawn at random, find the probability that:  
(i) both the balls are white  
(ii) one ball is black and the other red  
(iii) both the balls are of the same colour.
- Five cards are drawn from a pack of 52 cards. What is the chance that these 5 will contain :  
(i) just one ace      (ii) at least one ace?
- The face cards are removed from a full pack. Out of the remaining 40 cards, 4 are drawn at random. What is the probability that they belong to different suits?
- The probability that a person will travel by plane is  $\frac{3}{5}$  and that he will travel by train is  $\frac{1}{4}$ . What is the probability that he (she) will travel by plane or train?
- Two cards are drawn from well, shuffled pack of 52 cards. Find the probability that either both are black or both are kings.
- A card is drawn at random from a well-shuffled deck of 52 cards. Find the probability of its being a spade or a king.
- In a single throw of two dice, find the probability that neither a doublet nor a total of 9 will appear.
- A natural number is chosen at random from amongst first 500. What is the probability that the number so chosen is divisible by 3 or 5?
- A die is thrown twice. What is the probability that at least one of the two throws come up with the number 3?

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15. A card is drawn from a deck of 52 cards. Find the probability of getting an ace or a spade card.
16. The probability that a student will pass the final examination in both English and Hindi is 0.5 and the probability of passing neither is 0.1. If the probability of passing the English examination is 0.75.  
What is the probability of passing the Hindi examination?
17. One number is chosen from numbers 1 to 100. Find the probability that it is divisible by 4 or 6?
18. From a well shuffled deck of 52 cards, 4 cards are drawn at random. What is the probability that all the drawn cards are of the same colour.
19. 100 students appeared for two examinations. 60 passed the first, 50 passed the second and 30 passed both. Find the probability that a student selected at random has passed at least one examination.
20. A box contains 10 white, 6 red and 10 black balls. A ball is drawn at random from the box. What is the probability that the ball drawn is either white or red?

