



MATHS

BOOKS - RD SHARMA MATHS (HINGLISH)

PROBABILITY

Others

1. In the given figure, A, B, C and D are centres of four circles that have a radius of 1 unit. If a

point is selected at random from interior of square ABCD, then what is the probability that it lies in the shaded region



[Watch Video Solution](#)

2. What is the probability that a number selected from the number 1,2,3..., 25 is a prime number, when each of the given numbers is equally likely to be selected?



[Watch Video Solution](#)

3. One card is drawn from a pack of 52 cards, each of the 52 cards being equally likely to be drawn. Find the probability that the card drawn is: an ace (ii) red (iii) either red or king (iv) red and a king.



[Watch Video Solution](#)

4. The king, queen and jack of clubs are removed from a deck of 52 playing cards and the well shuffled. One card is selected from the remaining cards. Find the probability of

getting. i) a heart ii) a king iii) a club iv) the 10 of hearts



[Watch Video Solution](#)

5. From a pack of 52 playing cards Jacks, queens, kings and aces of red colour are removed. From the remaining, a card is drawn at random. Find the probability that the card drawn is : a black queen (ii) a red card (iii) a black jack



[Watch Video Solution](#)

6. A piggy bank contains hundred 50 paise coins, fifty Rs. 1 coins, twenty Rs. 2 coins and ten Rs. 5 coins. If it is equally likely that one of the coins will fall out when the bank is turned upside down, find the probability that the coin which fell will be a 50 paise coin will be of value more than Rs. 1 will be of value less than Rs. 5 will be a Rs. 1 or Rs. 2 coin.



[Watch Video Solution](#)

7. All jacks, queens and kings are removed from a pack of 52 cards. The remaining cards are well-shuffled and then a card is randomly drawn from it. Find the probability that this cards is (i) a black face card (ii) a red card



[Watch Video Solution](#)

8. The probability that an year chosen at random has 53 Sundays is :



[Watch Video Solution](#)

9. Two unbiased coins are tossed simultaneously. Find the probability of getting

two head (ii) one head one tail
(iv) at least one head at most one head (vi) no head



[Watch Video Solution](#)

10. Two dice are thrown. Find the probability of getting an odd number on the first die and a multiple of 3 on the other.



[Watch Video Solution](#)

11. In the accompanying diagram a fair spinner is placed at the centre O of the circle, Diameter AOB and radius OC divide the circle into three regions labelled X , Y and Z . If $\angle BOC = 45^\circ$. What is the probability that the spinner will land in the region X ?



[Watch Video Solution](#)

12. An unbiased die is thrown. What is the probability of getting: (i) an even number (ii) a multiple of 3 (iii) an even number or a multiple of 3 (iv) an even number and a multiple of 3 (v) a number 3 or 4 (vi) an odd number (vii) a number less than 5 (viii) a number greater than 3 (ix) a number between 3 and 6



Watch Video Solution

13. All red face cards are removed from a pack of playing cards. The remaining cards are well shuffled and then a card is drawn at random from then. Find the probability that the drawn card is (i) a red card (ii) a face card and (iii) a card of clubs.



Watch Video Solution

14. A square dart board is placed in the first quadrant from $x = 0$ to $x = 6$ and

$y = 0 \rightarrow y = 6$. A triangular region on the dart board is enclosed by the lines $y = 2$, $x = 6$ and $y = x$. Find the probability that a dart that randomly hits the dart board will land in the triangular region formed by the three lines.



[Watch Video Solution](#)

15. In figure, a dart is thrown and lands in the interior of the circle. What is the probability that the dart will land in the shaded region?



[Watch Video Solution](#)

16. Three unbiased coins are tossed together.

Find the probability of getting:

(i) all heads

(ii) two heads

(iii) one head

(iv) at least two heads



[Watch Video Solution](#)

17. A target shown in Figure, consists of three concentric circles of radii 3, 7 and 9cm respectively. A dart is thrown and lands on the target. What is probability that the dart will land on the shaded region?



Watch Video Solution

18. Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at

random. What is the probability that the ticket has a number which is a multiple of 3 or 7?



[Watch Video Solution](#)

19. In a family of 3 children, the probability of

having at least one boy is $\frac{7}{8} \frac{1}{8} \frac{5}{8} \frac{3}{4}$



[Watch Video Solution](#)

20. Find the probability that a number selected at random from the numbers 1,2,3,...35

is a prime number multiple of 7 a multiple of 3
or 5



[Watch Video Solution](#)

21. In a simultaneous throw of a pair of dice,
find the probability of getting:

an even number on first an even number on
one and a multiple of 3 on the other

(viii) neither 9 or 11 as the sum of the numbers
on the faces

(ix) a sum less than 6

(x) a sum less than 7 (xvi) 2 will come up at least once

(xvii) 2 will not come either time



[Watch Video Solution](#)

22. A number is selected at random from the numbrs 3,5,5,7,7,7, 9,9,9,9. The probability that the selected number is their average is $\frac{1}{10}$ (b) $\frac{3}{10}$ (c) $\frac{7}{10}$ (d) $\frac{9}{10}$



[Watch Video Solution](#)

23. The probability of guessing the correct answer to a certain test questions is $\frac{x}{12}$ If the probability of not guessing the correct answer to this question is $\frac{2}{3}$ then $x =$ (a) 2 (b) 3 (c) 4 (d) 6



Watch Video Solution

24. Two dice are rolled one after the other. The probability that the number on the first dice is smaller than that of the number on second dice is-



[Watch Video Solution](#)

25. A letter is chosen at random from the letters of the word ASSASSINATION. Find the probability that the chosen is (i) a vowel (ii) consonant.



[Watch Video Solution](#)

26. A number x is selected from the numbers 1, 2, 3 and then a second number y is randomly

selected from the numbers 1,4,9. What is the probability that the product xy of the two numbers will be less than 9?



[Watch Video Solution](#)

27. A jar contains 54 marbles each of which is blue, green or white. The probability of selecting a blue marble at random from the jar is $\frac{1}{3}$, and the probability of selecting a green marble at random is $\frac{4}{9}$. How many white marbles does the jar contain?



[Watch Video Solution](#)

28. It is known that a box of 600 electric bulbs contains 12 defective bulbs. One bulb is taken out at random from this box. What is the probability that it is a non-defective bulb?



[Watch Video Solution](#)

29. A bag contains 3 red and 2 blue marbles. A marble is drawn at random. What is the probability of drawing a blue marble?



[Watch Video Solution](#)

30. A bag contains 5 red balls, 8 white balls, 4 green balls and 7 black balls. If one ball is drawn at random, find the probability that it is: (i) black (ii) red (iii) not green



[Watch Video Solution](#)

31. 17 cards numbered 1,2,3....., 17 are put in a box and mixed thoroughly. One person draws

a card from the box. Find the probability that the number on the card is: (i) odd (ii) a prime (iii) divisible by 3 (iv) divisible by 3 and 2 both



[Watch Video Solution](#)

32. In the Figure, a square dart board is shown. The length of a side of the larger square is 1.5 times the length of a side of the smaller square. If a dart is thrown and lands on the

larger square. What is the probability that it will land in the interior of the smaller square?



[Watch Video Solution](#)

33. Two numbers a and b are selected successively without replacement in that order from the integers 1 to n . If a/b is an integer, is



[Watch Video Solution](#)

34. If number x is chosen from the numbers 1,2,3, and a number y is selected from the numbers 1,4,9. Then, $P(xy < 9)$. $\frac{7}{9}$ (b) $\frac{5}{9}$ (c) $\frac{2}{3}$ (d) $\frac{1}{9}$



Watch Video Solution

35. One card is drawn from a well shuffled deck of 52 cards. Find the probability of getting: (i) a queen of black suit (ii) a jack of hearts (iii) a spade





[Watch Video Solution](#)

36. A bag contains 5 red, 8 white and 7 black balls. A ball is drawn at random from the bag. Find the probability that the drawn ball is (i) red or white (ii) not black (iii) neither white nor black.



[Watch Video Solution](#)

37. A bag contains 8 red, 6 white and 4 black balls. A ball is drawn at random from the bag.

Find the probability that the drawn ball is (i) red or white (ii) not black (iii) neither white nor black.



[Watch Video Solution](#)