doubtnut
India's Number 1 Education App

MATHS

BOOKS - PATHFINDER MATHS (BENGALI ENGLISH)

PROBABILITY

Question Bank

1. An um contains 30 tickets numbered 1 to 30 two tickets are drawn at random the

probability that both the numbers are prime is

A. $\hat{}\ 8c_2 / (30c_2)$

B. $\hat{}\ 9c_2 /^{30} c_2$

C. $\hat{}\ 10c_2 /^{30} c_2$

D. $\hat{}\ 11c_2 /^{30} c_2$

Answer: C

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2. If a die is thrown then the probability of getting an even number is

A. (1/6)

B. (1/2)

C. (1/3)

D. none of these

Answer: B

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3. Two dice are thrown simultaneously the probability of getting a total of at least 10 is

A. (1/6)

B. (1/12)

C. (1/3)

D. none of these

Answer: A

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4. An urn contains 9 red, 7 white, and 4 black balls if two balls are drawn at random the probability that both the balls are red is

A. (18/95)

B. (36/95)

C. (18/190)

D. none of these

Answer: A

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5. If $P(A \cap B) = \frac{5}{13}$,$P(A \cap B)^c$=`

A. (4/13)

B. (6/13)

C. (7/13)

D. (8/13)

Answer: D

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6. P(A)=1/2 ,P(B)=2/5 and $P(A \cup B)$=0.7 state whether the events A and B are mutually exclusive

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7. P(A)=1/2 ,P(B)=2/5 and $P(A \cup B)$=0.7 state whether the events A and B are mutually exclusive

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8. Two events A and B are mutually not exclusive events if P(A)=1/4,P(B)=2/5 and $P(A \cup B)$=1/2 then find $P(A \cap B^c)$

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9. P(A-B)=1/3,P(A)=1/2,P(B)=1/3 calculate the probability that out of the two events A and B only B will occur

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10. Find the probability that an even integer chosen at random from first 400 positive integers is divisible by 5 or 7?

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11. Two events A and B have probabilities 0.25 and 0.50 respectively the probability that both A and B occur simultaneously is 0.14 find the probability that neither A nor B occurs.

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12. A,B and C are three mutually exclusive and exhaustive events and P(A) =2P(B) =3P(C) then find P(A)

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13. If 3 unbiased coins are tossed simultaneously describe the sample space and find the probability that at most one head comes.

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14. The integers x and y are chosen at random with replacement from nine natural numbers 1,2,3,....8,9 find the probability that $\left(x^2 - y^2\right)$ is divisible by 2

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15. Two unbiased coins are thrown together show that the events 1st coin shows a head and 2nd coin shows a head are independent events.

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16. Show that two independent events with positive probabilities can't be mutually exclusive and vice versa.

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17. Two cards are drawn from a well shuffled pack of cards find the probability that they are of different colour when they are selected together.

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18. If P(A)=x,P(B)=y and $P(A \cap B) = z$ then express $P(\overline{A} \cap \overline{B})$ and $P(\overline{A} \cup B)$ in terms of x,y,z.

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19. Find the probability that the birthday of 7 persons will fall on 7 different days of the

week assuming equal probability for each of these days.

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

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21. The number lock of a suitcase has 4 wheels each labeled with ten digits from 0 to 9 the lock open with a sequence of four digits with no repeats what is the probability of a person getting the right sequence to open the suitcase?

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22. Find the probability that the birth days of six different persons will fall in exactly two

calendar months.

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23. The letter of word $SOCIETY$ are placed at random in a row what is the probability that three vowels comes together?

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24. What is the probability that a non leap year selected at random will contain 53

sundays?

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25. The odds in favour of an event are 3:5 find the probability of occurrence of this event?

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26. An integer is chosen at random from the first 100 positive integers what is the

probability that the integer is divisible by 6 or 8?

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27. A secretary writes 4 letters and the corresponding address on 4 envelopes if he inserts the letters in the envelopes at random irrespective of address then calculate the probability that all the letters are wrongly placed.

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28. Two unbiased dice are thrown find the probability of obtaining

a total of 8 points

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29. Two unbiased dice are thrown find the probability of obtaining

at least an ace.

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30. Three groups of children contain respectively 3 girls and 1 boy, 2 girls and 2 boys and 1 girl and 3 boys one child is selected at random from each group find the chance that the selected group contain 1 girl and 2 boys.

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31. A speaks truth in 70% cases and his friend B speaks lie in 20% cases .in what percentage

of cases are they likely to contradict each other in narrating the same incident ?

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32. The odds in favour of an event A are 3:4 the odds against another independent event B are 7:4 what is the probability that at least one of the event will happen?

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33. A box contains 7 white and 5 black balls two are drawn at random find the probability that they are not of the same colour when the balls are drawn at a time

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34. A box contains 7 white and 5 black balls three are drawn at random find the probability that they are not of the same colour when one by one without replacement.

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35. The probabilities of solving a problem by three students A,B,C are 3/7,3/8,and 1/3 if all of them try independently find the probability that the problem is not solved.

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36. If the letters of the word $MOTHER$ are arranged at random then find the probability that the vowels will be next to each other.

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37. If a fair coin is tossed thrice find the probability that there are

at most one tail

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38. If a fair coin is tossed thrice find the probability that there are

at least one head

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39. Two players A and B toss a die alternately he who first throws a six wins the game if A begins what is the probability that he wins? What is the probability of B winning the game?

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40. From set of 1000 cards serially numbered 1,2,3....1000 one card is drawn at random find

the probability that the number found is a multiple of

12 and 18

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41. From set of 1000 cards serially numbered 1,2,3....1000 one card is drawn at random find the probability that the number found is a multiple of

12 and 18

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