



MATHS

BOOKS - SELINA MATHS (ENGLISH)

PROBABILITY

Example

1. Find the probability of getting a head when a coin is tossed once.



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2. A bag contains a black ball, a red ball and a green ball, all the balls are identical in shape and size. Mohit takes out a ball from the bag, without looking into it. What is the probability that the ball drawn is :

(i) red ball ?



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3. A bag contains a black ball, a red ball and a green ball, all the balls are identical in shape and size. Mohit takes out a ball from the bag, without looking into it. What is the probability that the ball drawn is :

(ii) black ball ?



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4. A bag contains a black ball, a red ball and a green ball, all the balls are identical in shape

and size. Mohit takes out a ball from the bag, without looking into it. What is the probability that the ball drawn is :
green ball ?



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5. In a single throw of a dice, find the probability of getting a number :

(i) greater than 2



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6. In a single throw of a dice, find the probability of getting a number :

(ii) less than or equal to 2



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7. In a single throw of a dice, find the probability of getting a number :

not greater than 2.



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8. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn will :

(i) be a face card



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9. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn will :

not be a face card.



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10. In a badminton match between Rajesh and Joseph, the probability of winning of Rajesh is 0.58. Find the probability of :

(i) not winning of Rajesh,



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11. In a badminton match between Rajesh and Joseph, the probability of winning of Rajesh is 0.58. Find the probability of :

(ii) winning of Joseph.



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12. In a single throw of a dice, find the probability of getting : (i) 7



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13. In a single throw of a dice, find the probability of getting : (ii) a number less than 7.



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14. A dice is thrown once. Find the probability of getting :
an odd number



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15. A dice is thrown once. Find the probability of getting :
a number greater than 4



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16. A dice is thrown once. Find the probability of getting :

a number between 2 and 6.



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17. Two dice are thrown simultaneously. Find the probability that :

both the dice show the same number.



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18. Two dice are thrown simultaneously. Find the probability that :
the first dice shows 6.



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19. Two dice are thrown simultaneously. Find the probability that :
the total (sum) of the numbers on the dice is
9.



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20. Two dice are thrown simultaneously. Find the probability that :
the product of the numbers on the dice is 8.



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21. Two dice are thrown simultaneously. Find the probability that :
the total of the numbers on the dice is greater than 9.



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22. A card is drawn from a pack of 100 cards numbered 1 to 100. Find the probability of drawing a number which is a perfect square.



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23. Three identical coins are tossed together. What is the probability of obtaining :
all heads ?



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24. Three identical coins are tossed together.

What is the probability of obtaining :

exactly two heads ?



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25. Three identical coins are tossed together.

What is the probability of obtaining :

exactly one head ?



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26. Three identical coins are tossed together.

What is the probability of obtaining :

at least one head ?



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27. Three identical coins are tossed together.

What is the probability of obtaining :

at least two heads ?



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28. Three identical coins are tossed together.

What is the probability of obtaining :

all tails ?



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29. Two dice are rolled simultaneously. Find

the probability of :

obtaining a total of at least 9.



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30. Two dice are rolled simultaneously. Find the probability of :

getting a multiple of 2 on one dice and a multiple of 3 on the other dice.



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31. Two dice are rolled simultaneously. Find the probability of :

getting a multiple of 3 as the sum.



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32. A dice is thrown two times. Find the probability that the product of numbers of the dice is :

4



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33. A dice is thrown two times. Find the probability that the product of numbers of the dice is :

6



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34. A dice is thrown two times. Find the probability that the product of numbers of the dice is :
a perfect square.



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35. A dice is rolled two times or two dice are rolled together. Find the probability of

getting:

an even number on each dice.



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36. A dice is rolled two times or two dice are rolled together. Find the probability of getting:

a prime number on each dice.



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37. A dice is rolled two times or two dice are rolled together. Find the probability of getting:

(iii) a composite number on each dice.



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38. From the pack of 52 playing cards, the black face cards are removed. Now the cards are re-shuffled and then a card is drawn from the remaining pack of cards. Find the

probability that the card drawn is :

(i) a black card



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39. From the pack of 52 playing cards, the black face cards are removed. Now the cards are re-shuffled and then a card is drawn from the remaining pack of cards. Find the probability that the card drawn is :

(ii) a king



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40. From the pack of 52 playing cards, the black face cards are removed. Now the cards are re-shuffled and then a card is drawn from the remaining pack of cards. Find the probability that the card drawn is :

(iii) an ace



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41. From the pack of 52 playing cards, the black face cards are removed. Now the cards are re-

shuffled and then a card is drawn from the remaining pack of cards. Find the probability that the card drawn is :

(iv) a spade card



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Exercise 25 A

1. A coin is tossed once. Find the probability of :

(i) getting a tail.



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2. A coin is tossed once. Find the probability of

:

(ii) not getting a tail.



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3. A bag contains 3 white, 5 black and 2 red balls, all of the same shape and size. A ball is drawn from the bag without looking into it,

find the probability that the ball drawn is :

(i) a black ball.



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4. A bag contains 3 white, 5 black and 2 red balls, all of the same shape and size. A ball is drawn from the bag without looking into it, find the probability that the ball drawn is :

(ii) a red ball.



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5. A bag contains 3 white, 5 black and 2 red balls, all of the same shape and size. A ball is drawn from the bag without looking into it, find the probability that the ball drawn is :

(iii) a white ball.



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6. A bag contains 3 white, 5 black and 2 red balls, all of the same shape and size. A ball is drawn from the bag without looking into it,

find the probability that the ball drawn is :

(iv) not a red ball.



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7. A bag contains 3 white, 5 black and 2 red balls, all of the same shape and size. A ball is drawn from the bag without looking into it, find the probability that the ball drawn is :

(v) not a black ball.



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8. In a single throw of a dice, find the probability of getting a number :

(i) greater than 4.



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9. In a single throw of a dice, find the probability of getting a number :

(ii) less than or equal to 4.



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10. In a single throw of a dice, find the probability of getting a number :

(iii) not greater than 4.



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11. In a single throw of a die, find the probability that the number:

will be an even number



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12. In a single throw of a die, find the probability that the number:
will not be an even number



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13. In a single throw of a die, find the probability that the number:
will be an odd number



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14. From a well-shuffled deck of 52 playing-cards, one card is drawn. Find the probability that the card drawn will :

(i) be a black card.



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15. From a well-shuffled deck of 52 playing-cards, one card is drawn. Find the probability that the card drawn will :

(ii) not be a red card.



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16. From a well-shuffled deck of 52 playing-cards, one card is drawn. Find the probability that the card drawn will :

(iii) be a red card.



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17. From a well-shuffled deck of 52 playing-cards, one card is drawn. Find the probability

that the card drawn will :

(iv) be a face card.



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18. From a well-shuffled deck of 52 playing-cards, one card is drawn. Find the probability that the card drawn will be a face card of red colour.



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19. (i) If A and B are two complementary events then what is the relation between $P(A)$ and $P(B)$?



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20. If the probability of happening of an event A is 0.46. What will be the probability of not happening of the event A ?



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21. In a T.T. match between Geeta and Ritu, the probability of the winning of Ritu is 0.73. Find the probability of :

(i) winning of Geeta.



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22. In a T.T. match between Geeta and Ritu, the probability of the winning of Ritu is 0.73. Find the probability of :

(ii) not winning of Ritu.



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23. In a race between Mahesh and John, the probability that John will lose the race is 0.54.

Find the probability of :

(i) winning of Mahesh.



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24. In a race between Mahesh and John, the probability that John will lose the race is 0.54.

Find the probability of :

(ii) winning of John.



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25. (i) Write the probability of a sure event.



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26. (ii) Write the probability of an event which is impossible.



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27. (iii) For an event E , write a relation representing the range of values of $P(E)$.



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28. In a single throw of a dice, find the probability of getting : (i) 5



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29. In a single throw of a dice, find the probability of getting : 8



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30. In a single throw of a dice, find the probability of getting : a number less than 8.



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31. In a single throw of a dice, find the probability of getting : a prime number.



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32. A dice is thrown once. Find the probability of getting :

(i) an even number.



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33. A dice is thrown once. Find the probability of getting :

(ii) a number between 3 and 8.



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34. A dice is thrown once. Find the probability of getting :

(iii) an even number or a multiple of 3.



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35. Which of the following cannot be the probability of an event ?

(i) $\frac{3}{5}$



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36. Which of the following cannot be the probability of an event ?

(ii) 2.7



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37. Which of the following cannot be the probability of an event ?

(iii) 43 %



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38. Which of the following cannot be the probability of an event ?

(iv) $-0,6$



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39. Which of the following cannot be the probability of an event ?

(v) -3.2



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40. Which of the following cannot be the probability of an event ?

(iv) 0.35



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41. A bag contains six identical black balls. A child withdraws one ball from the bag without looking into it. What is the probability that he takes out :
a white ball ?



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42. A bag contains six identical black balls. A child withdraws one ball from the bag without looking into it. What is the probability that he

takes out :

a black ball ?



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43. A single letter is selected at random from the word 'Probability'

. Find the probability that it is a vowel.



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44. Ramesh chooses a date at random in January for a party (see the following figure).

Find the probability that he chooses :

(i) a Wednesday



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45. Ramesh chooses a date at random in January for a party (see the following figure).

Find the probability that he chooses :

(ii) a Friday





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46. Ramesh chooses a date at random in January for a party (see the following figure).

Find the probability that he chooses :

(iii) a Tuesday or a Saturday.



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Exercise 25 B

1. Nine cards (identical in all respects) are numbered 2 to 10. A card is selected from them at random. Find the probability that the card selected will be :
an even number.



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2. Nine cards (identical in all respects) are numbered 2 to 10. A card is selected from them at random. Find the probability that the

card selected will be :

a multiple of 3.



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3. Nine cards (identical in all respects) are numbered 2 to 10. A card is selected from them at random. Find the probability that the card selected will be :

an even number and a multiple of 3.



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4. Nine cards (identical in all respects) are numbered 2 to 10. A card is selected from them at random. Find the probability that the card selected will be :

-->an even number or a multiple of 3.



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5. Hundred identical cards are numbered from 1 to 100. The cards are well shuffled and then a card is drawn. Find the probability that the

number on the card drawn is :

(i) a multiple of 5.



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6. Hundred identical cards are numbered from 1 to 100. The cards are well shuffled and then a card is drawn. Find the probability that the number on the card drawn is :

(ii) a multiple of 6.



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7. Hundred identical cards are numbered from 1 to 100. The cards are well shuffled and then a card is drawn. Find the probability that the number on the card drawn is :

(iii) between 40 and 60.



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8. Hundred identical cards are numbered from 1 to 100. The cards are well shuffled and then a card is drawn. Find the probability that the number on the card drawn is greater than 85.



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9. Hundred identical cards are numbered from 1 to 100. The cards are well shuffled and then a card is drawn. Find the probability that the number on the card drawn is less than 48.



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10. From 25 identical cards, numbered 1, 2, 3, 4, 5,, 24, 25, one card is drawn at random.

Find the probability that the number on the card drawn :

is a multiple of 3



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11. From 25 identical cards, numbered 1, 2, 3, 4, 5,, 24, 25, one card is drawn at random.

Find the probability that the number on the card drawn

is a multiple of : 5



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12. From 25 identical cards, numbered 1, 2, 3, 4, 5,, 24, 25, one card is drawn at random.

Find the probability that the number on the card drawn

is a multiple of 3 and 5



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13. From 25 identical cards, numbered 1, 2, 3, 4, 5,, 24, 25, one card is drawn at random.

Find the probability that the number on the

card drawn

is a multiple of 3 or 5.



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14. A dice is thrown once. Find the probability of getting a number :
less than 3.



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15. A dice is thrown once. Find the probability of getting a number :
greater than or equal to 4.



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16. A dice is thrown once. Find the probability of getting a number :
less than 8.



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17. A dice is thrown once. Find the probability of getting a number :
greater than 6.



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18. A book contains 85 pages. A page is chosen at random. What is the probability that the sum of the digits on the page is 8 ?



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19. A pair of dice is thrown . Find the probability of getting a sum of 10 or more , if 5 appears on the first die .



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20. If two coins are tossed once, what is the probability of getting :
2 heads ?



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21. If two coins are tossed once, what is the probability of getting :
at least one head ?



Watch Video Solution

22. If two coins are tossed once, what is the probability of getting :
both heads or both tails ?



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23. Two dice are rolled together. Find the probability of getting a total of at least 10.



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24. Two dice are rolled together. Find the probability of getting a multiple of 2 on one dice and an odd number on the other dice.



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25. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is a spade.



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26. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is:

(ii) a red card.



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27. A card is drawn from a well shuffled pack of 52 cards . Find the probability of a face card



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28. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is:

(iv) 5 of heart or diamond.



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29. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is:

(v) Jack or queen.



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30. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card

drawn is:

(vi) ace and king.



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31. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is:

(vii) a red and a king.



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32. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is:

(viii) a red or a king.



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33. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the

probability that the ball chosen is :

(i) red



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34. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the probability that the ball chosen is :

(ii) not red



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35. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the probability that the ball chosen is :

(iii) white



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36. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the

probability that the ball chosen is :

(iv) not white



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37. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the probability that the ball chosen is green or red .



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38. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the probability that the ball chosen is white or green .



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39. A bag contains 16 coloured balls. Six are green, 7 are red and 3 are white. A ball is chosen, without looking into the bag. Find the

probability that the ball chosen is green or red or white.



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40. A ball is drawn at random from a box containing 12 white, 16 red and 20 green balls. Determine the probability that the ball drawn is:

(i) white



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41. A ball is drawn at random from a box containing 12 white, 16 red and 20 green balls. Determine the probability that the ball drawn is:

(ii) red



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42. A ball is drawn at random from a box containing 12 white, 16 red and 20 green balls. Determine the probability that the ball drawn

is:

(iii) not green



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43. A ball is drawn at random from a box containing 12 white, 16 red and 20 green balls.

Determine the probability that the ball drawn

is:

(iv) red or white.



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44. A card is drawn from a pack of 52 cards.

Find the probability that the card drawn is :

(i) a red card



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45. A card is drawn from a pack of 52 cards.

Find the probability that the card drawn is :

(ii) a black card



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46. A card is drawn from a well-shuffled pack of 52 cards. Find the probability that the card drawn is a spade.



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47. A card is drawn from a well shuffled pack of 52 cards . Find the probability of an ace



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48. A card is drawn from a pack of 52 cards.

Find the probability that the card drawn is :

(v) a black ace



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49. A card is drawn from a pack of 52 cards.

Find the probability that the card drawn is ace of diamonds.



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50. A card is drawn from a pack of 52 cards. Find the probability that the card drawn is not a club.



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51. A card is drawn from a pack of 52 cards. Find the probability that the card drawn is a queen or a jack.



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52. Thirty identical cards are marked with numbers 1 to 30. If one card is drawn at random, find the probability that it is :

(i) a multiple of 4 or 6.

(ii) a multiple of 3 and 5

(iii) a multiple of 3 or 5



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53. Thirty identical cards are marked with numbers 1 to 30. If one card is drawn at

random, find the probability that it is :
a multiple of 3 and 5.



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54. Thirty identical cards are marked with numbers 1 to 30. If one card is drawn at random, find the probability that it is a multiple of 3 or 5.



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55. In a single throw of two dice, find the probability of a doublet .



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56. In a single throw of two dice, find the probability of :

(ii) a number less than 3 on each dice.



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57. In a single throw of two dice, find the probability of :

(iii) an odd number as a sum.



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58. In a single throw of two dice, find the probability of :

(iv) a total of atmost 10.



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59. In a single throw of two dice, find the probability of an odd number on one dice and a number less than or equal to 4 on the other dice.



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Exercise 25 C

1. A bag contains 3 red balls, 4 blue balls and one yellow ball, all the balls being identical in shape and size. If a ball is taken out of the bag

without looking into it, find the probability that the ball is :

(i) yellow



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2. A bag contains 3 red balls, 4 blue balls and one yellow ball, all the balls being identical in shape and size. If a ball is taken out of the bag without looking into it, find the probability that the ball is :

(ii) red



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3. A bag contains 3 red balls, 4 blue balls and one yellow ball, all the balls being identical in shape and size. If a ball is taken out of the bag without looking into it, find the probability that the ball is :

(iii) not yellow



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4. A bag contains 3 red balls, 4 blue balls and one yellow ball, all the balls being identical in shape and size. If a ball is taken out of the bag without looking into it, find the probability that the ball is :

(iv) neither yellow nor red



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5. A dice is thrown once. What is the probability of getting a number :

(i) greater than 2 ?



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6. A dice is thrown once. What is the probability of getting a number less than or equal to 2 ?



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7. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the

card drawn is a face card.



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8. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn is not a face card.



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9. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the

card drawn is :

(iii) a queen of black colour.



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10. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn is a card with number 5 or 6.



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11. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn is a card with number less than 8.



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12. From a well-shuffled deck of 52 cards, one card is drawn. Find the probability that the card drawn is :

(vi) a card with number between 2 and 9.



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13. In a match between A and B, the probability of winning of A is 0.83. What is the probability of winning of B when there is no other result then win or lose?



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14. In a match between A and B, the probability of losing the match is 0.49 for B . What is the probability of winning of A if they had only result win or lose?



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15. A and B are friends. Ignoring the leap year, find the probability that both friends will have different birthdays.



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16. A and B are friends. Ignoring the leap year, find the probability that both friends will have the same birthday.



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17. A man tosses two different coins (one of Rs. 2 and another of Rs. 5) simultaneously. What is the probability that he gets :
at least one head ?



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18. A man tosses two different coins (one of Rs. 2 and another of Rs. 5) simultaneously. What is

the probability that he gets :

atmost one head ?



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19. A box contains 7 red balls, 8 green balls and 5 white balls. A ball is drawn at random from the box. Find the probability that the ball is white.



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20. A box contains 7 red balls, 8 green balls and 5 white balls. A ball is drawn at random from the box. Find the probability that the ball is neither red nor white.



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21. All the three face cards of spades are removed from a well-shuffled pack of 52 cards. A card is then drawn at random from the remaining pack. Find the probability of getting

:

(i) a black face card



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22. All the three face cards of spades are removed from a well-shuffled pack of 52 cards.

A card is then drawn at random from the remaining pack. Find the probability of getting

:

(ii) a queen



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23. All the three face cards of spades are removed from a well-shuffled pack of 52 cards. A card is then drawn at random from the remaining pack. Find the probability of getting a black card.



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24. In a musical chairs game, a person has been advised to stop playing the music at any time within 40 seconds after its start. What is

the probability that the music will stop within the first 15 seconds ?



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25. In a bundle of 50 shirts, 44 are good, 4 have minor defects and 2 have major defects. What is the probability that a shirt is acceptable to a trader who accepts only a good shirt ?



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26. In a bundle of 50 shirts, 44 are good, 4 have minor defects and 2 have major defects.

What is the probability that :

(ii) it is acceptable to a trader who rejects only a shirt with major defects ?



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27. Two dice are thrown at the same time. Find the probability that the sum of the two numbers appearing on the top of the dice is :

(i) 8



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28. Two dice are thrown at the same time. Find the probability that the sum of the two numbers appearing on the top of the dice is :

(ii) 13



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29. Two dice are thrown at the same time. Find the probability that the sum of the two

numbers appearing on the top of the dice is :

(iii) less than or equal to 12.



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30. Is the value $\frac{3}{7}$ can be the probability of an event or not ?



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31. Is the value 0.82 can be the probability of an event or not ?



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32. Which of the following cannot be the probability of an event ?

- (i) $\frac{3}{7}$ (ii) 0.82 (iii) 37 % (iv) -2.4



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33. Is the value -2.4 can be the probability of an event or not ?



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34. If $P(E) = 0.59$, find $P(\text{not } E)$.



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35. A bag contains a certain number of red balls. A ball is drawn. Find the probability that the ball drawn is black.



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36. A bag contains a certain number of red balls. A ball is drawn. Find the probability that the ball drawn is red.



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37. The probability that two boys do not have the same birthday is 0.897. What is the probability that the two boys have the same birthday ?



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38. A bag contains 10 red balls, 16 white balls and 8 green balls. A ball is drawn out of the bag at random. What is the probability that the ball drawn is not red ?



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39. A bag contains 10 red balls, 16 white balls and 8 green balls. A ball is drawn out of the bag at random. What is the probability that the ball drawn is neither red nor green ?



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40. A bag contains 10 red balls, 16 white balls and 8 green balls. A ball is drawn out of the bag at random. What is the probability that the ball drawn is white or green ?



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41. A bag contains twenty Rs. 5 coins, fifty Rs. 2 coins and thirty Rs. 1 coins. If it is equally likely

that one of the coins will fall down when the bag is turned upside down, what is the probability that the coin is a Rs. 1 coin ?



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42. A bag contains twenty Rs. 5 coins, fifty Rs. 2 coins and thirty Rs. 1 coins. If it is equally likely that one of the coins will fall down when the bag is turned upside down, what is the probability that the coin :

(ii) will not be a Rs. 2 coin ?



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43. A bag contains twenty Rs. 5 coins, fifty Rs. 2 coins and thirty Rs. 1 coins. If it is equally likely that one of the coins will fall down when the bag is turned upside down, what is the probability that the coin :

(iii) will neither be a Rs. 5 coin nor be a Rs. 1 coin ?



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44. A game consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, as shown below.



If the outcomes are equally likely, find the probability that the pointer will point at :

(i) 6



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45. A game consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. If the outcomes are equally likely, find the probability that the pointer will point at an even number.



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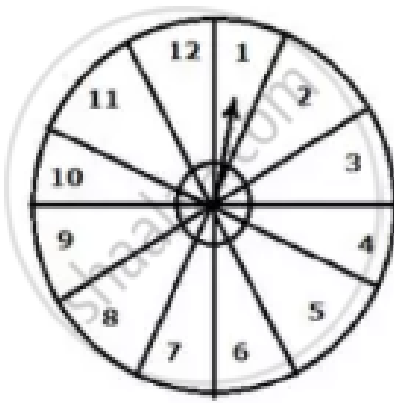
46. A game consists of spinning an arrow which comes to rest pointing at one of the

numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. If the outcomes are equally likely, find the probability that the pointer will point at a prime number.



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47. A game consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, as shown below.



If the outcomes are equally likely, find the probability that the pointer will point at :

(i) a number greater than 8.



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48. A game consists of spinning an arrow which comes to rest pointing at one of the

numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. If the outcomes are equally likely, find the probability that the pointer will point at a number less than or equal to 9.



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49. A game consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. If the outcomes are equally likely, find the

probability that the pointer will point at a number between 3 and 11.



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50. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting :

(i) a queen of red colour.



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51. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting :

(ii) a black face card.



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52. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting :

(iii) the jack or the queen of hearts.



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53. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting a diamond.



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54. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting a diamond or a spade.



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55. From a deck of 52 cards, all the face cards are removed and then the remaining cards are shuffled. Now one card is drawn from the remaining deck. Find the probability that the card drawn is :

(i) a black card.



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56. From a deck of 52 cards, all the face cards are removed and then the remaining cards are shuffled. Now one card is drawn from the

remaining deck. Find the probability that the card drawn is :

(ii) 8 of red colour.



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57. From a deck of 52 cards, all the face cards are removed and then the remaining cards are shuffled. Now one card is drawn from the remaining deck. Find the probability that the card drawn is :

(iii) a king of black colour.



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58. Seven cards : the eight, the nine, the ten, jack, queen, king and ace of diamonds are well shuffled. One card is then picked up at random.

(i) What is the probability that the card drawn is the eight or the king ?



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59. Seven cards : the eight, the nine, the ten, jack, queen, king and ace of diamonds are well shuffled. One card is then picked up at random.

(ii) If the king is drawn and put aside, what is the probability that the second card picked up is : (a) an ace ? (b) a king ?



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60. A box contains 150 bulbs out of which 15 are defective. It is not possible to just look at a bulb and tell whether or not it is defective. One bulb is taken out at random from this box. Calculate the probability that the bulb taken out is :

(i) a good one



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61. A box contains 150 bulbs out of which 15 are defective. It is not possible to just look at a bulb and tell whether or not it is defective. One bulb is taken out at random from this box. Calculate the probability that the bulb taken out is :

(ii) a defective one.



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62. (i) 4 defective pens are accidentally mixed with 16 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is drawn at random from the lot. What is the probability that the pen is defective ?



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63. 4 Defective Pens Are Accidentally Mixed with 16 Good Ones. It is Not Possible to Just

Look at a Pen and Tell Whether Or Not It is Defective. One Pen is Drawn at Random from the Lot

Suppose the pen drawn is defective and is not replaced. Now one more pen is drawn at random from the rest. What is the probability that this pen is : (a) defective ? (b) not defective ?



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64. A bag contains 100 identical marble stones which are numbered from 1 to 100. If one stone is drawn at random from the bag, find the probability that it bears a perfect square number.



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65. A bag contains 100 identical marble stones which are numbered from 1 to 100. If one stone is drawn at random from the bag, find

the probability that it bears a number divisible by 4.



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66. A bag contains 100 identical marble stones which are numbered from 1 to 100. If one stone is drawn at random from the bag, find the probability that it bears :

(iii) a number divisible by 5.



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67. A bag contains 100 identical marble stones which are numbered from 1 to 100. If one stone is drawn at random from the bag, find the probability that it bears :

(iv) a number divisible by 4 or 5.



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68. A bag contains 100 identical marble stones which are numbered from 1 to 100. If one stone is drawn at random from the bag, find

the probability that it bears :

(v) a number divisible by 4 and 5.



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69. A circle with diameter 20 cm is drawn somewhere on a rectangular piece of paper with length 40 cm and width 30 cm. This paper is kept horizontal on table top and a dice, very small in size, is dropped on the rectangular paper without seeing towards it. If the dice falls and lands on the paper only, find the

probability that it will fall and land inside the circle.



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70. A circle with diameter 20 cm is drawn somewhere on a rectangular piece of paper with length 40 cm and width 30 cm. This paper is kept horizontal on table top and a dice, very small in size, is dropped on the rectangular paper without seeing towards it. If the dice falls and lands on the paper only, find the

probability that it will fall and land :

(ii) outside the circle.



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71. Two dice (each bearing numbers 1 to 6) are rolled together. Find the probability that the sum of the numbers on the upper-most faces of two dice is :

(i) 4 or 5.



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72. Two dice (each bearing numbers 1 to 6) are rolled together. Find the probability that the sum of the numbers on the upper-most faces of two dice is :

(ii) 7, 8 or 9.



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73. Two dice (each bearing numbers 1 to 6) are rolled together. Find the probability that the sum of the numbers on the upper-most faces

of two dice is :

(iii) between 5 and 8.



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74. Two dice (each bearing numbers 1 to 6) are rolled together. Find the probability that the sum of the numbers on the upper-most faces of two dice is :

(iv) more than 10.



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75. Two dice (each bearing numbers 1 to 6) are rolled together. Find the probability that the sum of the numbers on the upper-most faces of two dice is :

(v) less than 6.



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76. Three coins are tossed together. Write all the possible outcomes. Now, find the probability of getting :
exactly two heads.



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77. Three coins are tossed together. Write all the possible outcomes. Now, find the probability of getting :
at least two heads.



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78. Three coins are tossed together. Write all the possible outcomes. Now, find the

probability of getting :

atmost two heads.



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79. Three coins are tossed together. Write all the possible outcomes. Now, find the probability of getting :
all tails.



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80. Three coins are tossed together. Write all the possible outcomes. Now, find the probability of getting :
at least one tail.



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81. Two dice are thrown simultaneously. What is the probability that :
(i) 4 will not come up either time ?



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82. Two dice are thrown simultaneously. What is the probability that :

(ii) 4 will come up at least once ?



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83. Cards marked with numbers 1, 2, 3, 4, 20 are well shuffled and a card is drawn at random. What is the probability that the number on the card is :
a prime number ?



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84. Cards marked with numbers 1, 2, 3, 4, 20 are well shuffled and a card is drawn at random. What is the probability that the number on the card is :
divisible by 3 ?



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85. Cards marked with numbers 1, 2, 3, 4, 20 are well shuffled and a card is drawn at random. What is the probability that the number on the card is :
a perfect square ?



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86. Offices in Delhi are open for five days in a week (Monday to Friday). Two employees of an office remain absent for one day in the same

particular week. Find the probability that they remain absent on :

(i) the same day



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87. Offices in Delhi are open for five days in a week (Monday to Friday). Two employees of an office remain absent for one day in the same particular week. Find the probability that they remain absent on :

(ii) consecutive day



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88. Offices in Delhi are open for five days in a week (Monday to Friday). Two employees of an office remain absent for one day in the same particular week. Find the probability that they remain absent on :

(iii) different days.



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89. A box contains some black balls and 30 white balls. If the probability of drawing a black ball is two-fifths of a white ball, find the number of black balls in the box.



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90. From a pack of 52 playing cards, all cards whose numbers are multiples of 3 are removed. A card is now drawn at random.

What is the probability that the card drawn is

(i) a face card (King, Jack or Queen)



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91. From a pack of 52 playing cards, all cards whose numbers are multiples of 3 are removed. A card is now drawn at random.

What is the probability that the card drawn is

(ii) an even numbered red card ?



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92. A dice has 6 faces marked by the given below :

1, 2, 3, -1, -2, -3

The dice is thrown once. What is the probability of getting a positive integer?



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93. A dice has 6 faces marked by the given below :

1, 2, 3, -1, -2, -3

The dice is thrown once. What is the

probability of getting an integer greater than -3 ?



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94. A dice has 6 faces marked by the given below :

1, 2, 3, -1, -2, -3

The dice is thrown once. What is the probability of getting the smallest integer?



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95. A bag contains 5 white balls, 6 red balls and 9 green balls. A ball is drawn at random from the bag. Find the probability that the ball drawn is :

(i) a green ball.



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96. A bag contains 5 white balls, 6 red balls and 9 green balls. A ball is drawn at random from the bag. Find the probability that the ball

drawn is :

(ii) a white or a red ball.



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97. A bag contains 5 white balls, 6 red balls and 9 green balls. A ball is drawn at random from the bag. Find the probability that the ball drawn is :

(iii) neither a green ball nor a white ball.



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98. A game of numbers has cards marked with 11, 12, 13, , 40. A card is drawn at random. Find the probability that the number on the card drawn is :

(i) a perfect square



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99. A game of numbers has cards marked with 11, 12, 13, , 40. A card is drawn at random. Find the probability that the number on the

card drawn is :

(ii) divisible by 7.



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100. Sixteen cards are labelled as $a, b, c, \dots, m, n, o, p$. They are put in a box and shuffled. A boy is asked to draw a card from the box. What is the probability that the card drawn is :

(i) a vowel



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101. Sixteen cards are labelled as a, b, c,..... m, n. o,p. They are put in a box and shuffled. A boy is asked to draw a card from the box. What is the probability that the card drawn is :

(ii) a consonant



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102. Sixteen cards are labelled as a, b, c,..... m, n. o,p. They are put in a box and shuffled. A boy is asked to draw a card from the box. What is

the probability that the card drawn is :

(iii) none of the letters of the word 'median'.



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103. A box contains a certain number of balls.

On each of 60% balls, letter A is marked. On

each of 30% balls, letter B is marked and on

each of remaining balls, letter C is marked. A

ball is drawn from the box at random. Find the

probability that the ball drawn is :

(i) marked C



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104. A box contains a certain number of balls. On each of 60% balls, letter A is marked. On each of 30% balls, letter B is marked and on each of remaining balls, letter C is marked. A ball is drawn from the box at random. Find the probability that the ball drawn is :

(ii) A or B



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105. A box contains a certain number of balls. On each of 60% balls, letter A is marked. On each of 30% balls, letter B is marked and on each of remaining balls, letter C is marked. A ball is drawn from the box at random. Find the probability that the ball drawn is :

(iii) neither B nor C.



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106. A box contains a certain number of balls. Some of these balls are marked A, some are marked B and the remaining's are marked C. When a ball is drawn at random from the box $P(A) = \frac{1}{3}$ and $P(B) = \frac{1}{4}$. If there are 40 balls in the box which are marked C, find the number of balls in the box.



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