



MATHS

BOOKS - SUPER COMPANION MADE EASY

PROBABILITY

Exercise 14 1

1. Complete the following statements :

Probability of an event E + Probability of the event 'not E ' =

_____ .



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2. Complete the following statements :

The probability of an event that cannot happen is _____ .

Such an event is called _____ .



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3. Complete the following statements :

The probability of an event that is certain to happen is

_____ . Such an event is called _____ .



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4. Complete the following statements :

The sum of the probabilities of all the elementary events of an

experiment is _____ .



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5. Complete the following statements :

The probability of an event is greater than or equal to _____ and less than or equal to _____ .



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6. Which of the following experiments have equally likely outcomes? Explain .

A driver attempts to start a car. The car starts or does not start.



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7. Which of the following experiments have equally likely outcomes? Explain .

A player attempts to shoot a basketball . She/he shoots or misses the shot.



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8. Which of the following experiments have equally likely outcomes? Explain .

A trial is made to answer a true- false question . The answer is right or wrong.



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9. Which of the following experiments have equally likely outcomes? Explain .

A baby is born. It is a boy or a girl.

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10. Why is tossing a coin considered to be a fair way of deciding which team should get the ball at the beginning of a football game?

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

(A) $\frac{2}{3}$

(B) -1.5

(C) 15%

(D) 0.7



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12. If $P(E) = 0.05$, what is the probability of 'not' E ?



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13. A bag contains lemon flavoured candies only. Malini takes out one candy without looking into the bag. What is the probability that she takes out an orange flavoured candy ?



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14. A bag contains lemon flavoured candies only. Malini takes out one candy without looking into the bag. What is the probability that she takes out a lemon flavoured candy?



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15. It is given that in a group of 3 students, the probability of 2 students not having the same birthday is 0.992 . What is the probability that the 2 students have the same birthday?



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16. A bag contains 3 red balls and 5 black balls. A ball is drawn at random from the bag.

What is the probability that the ball drawn is

red ?



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17. A bag contains 3 red balls and 5 black balls. A ball is drawn at random from the bag.

What is the probability that the ball drawn is

not red ?



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18. A box contains 5 red marbles, 8 white marbles and 4 green marbles . One marble is taken out of the box at random.

What is the probability that the marble taken out will be

red ?



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19. A box contains 5 red marbles, 8 white marbles and 4 green marbles . One marble is taken out of the box at random.

What is the probability that the marble taken out will be white ?



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20. A box contains 5 red marbles, 8 white marbles and 4 green marbles . One marble is taken out of the box at random.

What is the probability that the marble taken out will be not green ?



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21. A piggy bank contains hundred 50p 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 that bank is turned upside down, what is the probability that the coin will be a 50 p coin ?



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22. A piggy bank contains hundred 50p 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 that bank is turned upside down, what is the probability that the coin will not be a Rs. 5 coin?



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23. Gopi buys a fish from a shop for his aquarium. The shopkeeper takes out one fish at random from a tank containing 5 male fish and 8 female fish . What is the probability that the fish taken out is a male fish ?



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24. A game of chance consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8 and these are equally likely outcomes. What is the probability that it will point at 8?



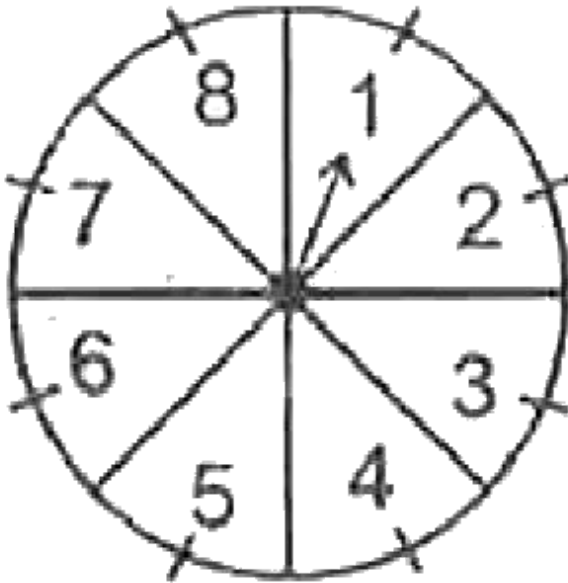
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25. A game of chance consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8 and these are equally likely outcomes. What is the probability that it will point at an odd number?



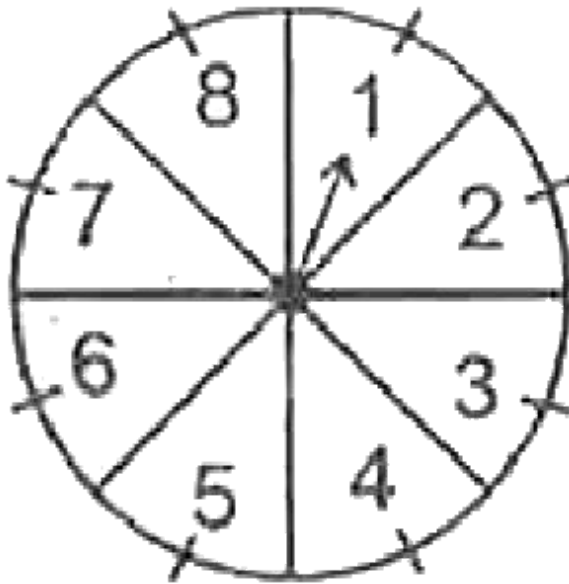
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26. A game of chance consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8 and these are equally likely outcomes. What is the probability that it will point at a number greater than 2 ?



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27. A game of chance consists of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3, 4, 5, 6, 7, 8 and these are equally likely outcomes. What is the probability that it will point at an number less than 9 ?



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28. A die is thrown once Find the probability that a prime numbers will appear



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29. A die is thrown once. Find the probability of getting a number lying between 2 and 6 .



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30. A die is thrown once. Find the probability of getting an odd number .



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31. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

a king of red colour



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32. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

a face card



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33. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

a red face card



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34. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

the jack of hearts



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35. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

a spade



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36. One card is drawn from a well - shuffled deck of 52 cards.

Find the probability of getting

the queen of diamonds



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37. Five cards - the ten , jack , queen , king and ace of diamonds, are well - shuffled with their face downwards, One card is then picked up at random.

What is the probability that the card is the queen?



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38. Five cards - the ten , jack , queen , king and ace of diamonds, are well - shuffled with their face downwards, One

card is then picked up at random.

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



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39. 12 defective pens are accidentally mixed with 132 good ones. It is not possible to just look at a pen and tell whether or not it is defective. One pen is taken out at random from this lot. Determine the probability that the pen taken out is a good one.



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40. A lot of 20 bulbs contain 4 defective ones. One bulb is drawn at random from the lot. What is the probability that

this bulb is defective ?



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41. Suppose the bulb drawn in (i) is not defective and is not replaced . Now one bulb is drawn at random from the rest. What is the probability that this bulb is not defective?



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42. A box contains 90 discs which are numbered from 1 to 90. If one disc is drawn at random from the box, find the probability that it bears a two - digit number .



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43. A box contains 90 discs. Which are numbered from 1 to 90. If one disc is drawn at random from the box. Find the probability that it bears a perfect square number.

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44. A box contains 90 discs which are numbered from 1 to 90. If one disc is drawn at random from the box, find the probability that it bears a number divisible by 5.

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45. A child has a die whose six faces show the letters as given below :



A die is thrown once. What is the probability of getting i) A ii) D

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46. Suppose you drop a die at random on the rectangular region . What is the probability that it will land inside the circle with diameter 1 m?

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47. A lot consists of 144 ball pens of which 20 are defective and the others are good. Nuri will buy a pen if it is good, but will not buy if it is defective . The shopkeeper drawn one pen

at random and gives it to her. What is the probability that

She will buy it?



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48. A lot consists of 144 ball pens of which 20 are defective and the others are good. Nuri will buy a pen if it is good, but will not buy if it is defective . The shopkeeper drawn one pen at random and gives it to her. What is the probability that She will not buy it ?



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49. Complete the following table :

Event: 'Sum on 2 dice'	2	3	4	5	6	7	8	9	10	11	12
Probability	$\frac{1}{36}$						$\frac{5}{36}$				$\frac{1}{36}$





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50. A game consists of tossing a one rupee coin 3 times and noting its outcome each time. Henif wins if all the tosses give the same result i.e., three heads or three tails, and loses otherwise. Calculate the probability that Henif will lose the game.



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51. A die is thrown twice. What is the probability that 5 will not come up either time ?



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52. A die is thrown twice. What is the probability that 5 will come up at least once?

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53. Which of the following arguments are correct and which are not correct? Give reasons for your answer.

If two coins are tossed simultaneously there are three possible outcomes - two heads, two tails or one of each. Therefore, for each of these outcomes, the probability is $\frac{1}{3}$

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54. Which of the following arguments are correct and which are not correct? Give reasons for your answer.

If a die is thrown, there are two possible outcomes - an odd number or an even number . Therefore, the probability of getting an odd number is $\frac{1}{2}$



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