

Learnzy Academy

Worksheet: Probability

1. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting (i) a king of red colour (ii) a face card (iii) a red face card (iv) the jack of hearts (v) a spade (vi) the queen of diamonds
2. 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 (i) red ? (ii) not red?
3. Which of the following cannot be the probability of an event? (A) $\frac{2}{3}$ (B) -1.5 (C) 15% (D) 0.7
4. 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?
5. In a lottery there are 10 prizes and 25 blanks. What is the probability of getting a prize?
6. (i) 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? (ii) 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 ?
7. Two dice are thrown at the same time and the product of numbers appearing on them is noted. Find the probability that the product is less than 9.
8. A coin is tossed 3 times. List the possible outcomes. Find the probability of getting (i) all heads (ii) at least 2 heads
9. A die is thrown twice. What is the probability that (i) 5 will not come up either time? (ii) 5 will come up at least once?
10. The record of a weather station shows that out of the past 250 consecutive days, its weather forecasts were correct 175 times. (i) What is the probability that on a given day it was correct? (ii) What is the probability that it was not correct on a given day?
11. Two dice are thrown at the same time. Determine the probability that the difference of the numbers on the two dice is 2.
12. A game consists of tossing a one rupee coin 3 times and noting its outcome each time. Hanif wins if all the tosses give the same result i.e., three heads or three tails, and loses otherwise. Calculate the probability that Hanif will lose the game.
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 (i) an orange flavoured candy? (ii) a lemon flavoured candy?
14. The probability that it will rain today is 0.84. What is the probability that it will not rain today?

15. 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?
16. Complete the following statements: (i) Probability of an event E + Probability of the event 'not E' = _____. (ii) The probability of an event that cannot happen is _____. Such an event is called _____. (iii) The probability of an event that is certain to happen is _____. Such an event is called _____. (iv) The sum of the probabilities of all the elementary events of an experiment is _____. (v) The probability of an event is greater than or equal to _____ and less than or equal to _____.
17. 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 draws one pen at random and gives it to her. What is the probability that (i) She will buy it ? (ii) She will not buy it ?
18. 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 (i) 8 ? (ii) an odd number? (iii) a number greater than 2? (iv) a number less than 9?
19. What is the probability that an ordinary year has 53 Sundays?
20. 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.