

Learnzy Academy

Worksheet: Probability

1. 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 ?
2. 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?
3. What is the probability that an ordinary year has 53 Sundays?
4. Which of the following cannot be the probability of an event? (A) $\frac{2}{3}$ (B) -1.5 (C) 15% (D) 0.7
5. Out of 400 bulbs in a box, 15 bulbs are defective. One bulb is taken out at random from the box. Find the probability that the drawn bulb is not defective.
6. A piggy bank contains hundred 50p coins, fifty $\text{₹}1$ coins, twenty $\text{₹}2$ coins and ten $\text{₹}5$ coins. If it is equally likely that one of the coins will fall out when the bank is turned upside down, what is the probability that the coin: (i) will be a 50p coin? (ii) will not be a $\text{₹}5$ coin?
7. 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 (i) a two-digit number (ii) a perfect square number (iii) a number divisible by 5.
8. Two dice are thrown at the same time. Determine the probability that the difference of the numbers on the two dice is 2.
9. (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 ?
10. A coin is tossed 3 times. List the possible outcomes. Find the probability of getting (i) all heads (ii) at least 2 heads
11. If $P(E) = 0.05$, what is the probability of 'not E'?
12. A die is thrown once. Find the probability of getting (i) a prime number; (ii) a number lying between 2 and 6; (iii) an odd number
13. In a lottery there are 10 prizes and 25 blanks. What is the probability of getting a prize?
14. 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?

- 15.** Two dice are numbered 1, 2, 3, 4, 5, 6 and 1, 1, 2, 2, 3, 3, respectively. They are thrown and the sum of the numbers on them is noted. Find the probability of getting each sum from 2 to 9 separately.
- 16.** 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?
- 17.** The probability that it will rain today is 0.84. What is the probability that it will not rain today?
- 18.** 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?
- 19.** 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?
- 20.** 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?