EduSahara™ Worksheet

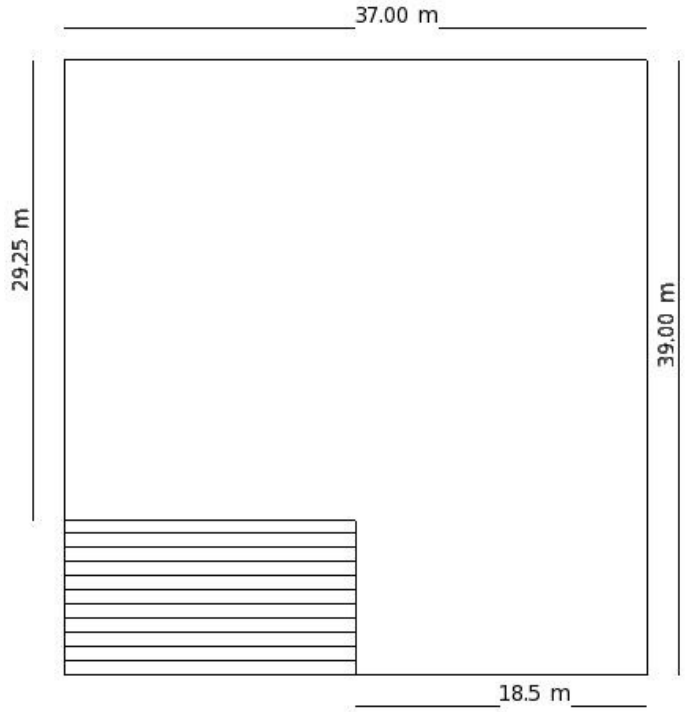
Name : Chapter Based Worksheet

Chapter : Probability

Grade : SSC Grade X



1. A missing helicopter is reported to have crashed somewhere in the rectangular region shown in fig. What is the probability that it crashed inside the shaded region as shown in the figure?




(i) 0 (ii) $\frac{7}{8}$ (iii) $\frac{1}{8}$ (iv) $\frac{2}{9}$ (v) $\frac{1}{4}$

2. A die is thrown 390 times. The number 2 appears on the upper face 74 times. Now the die is thrown at random. What is the probability of getting a 2 ?

(i) $\frac{37}{195}$ (ii) $\frac{19}{98}$ (iii) $\frac{38}{195}$ (iv) $\frac{12}{65}$ (v) $\frac{158}{195}$

3. What is the probability of a sure event?

(i) $\frac{1}{2}$ (ii) $\frac{3}{4}$ (iii) $\frac{1}{4}$ (iv) 0 (v) 1

4. Which of the following are true?

a) P(E) - P(not E) = 0

b) $P(E) + P(\overline{E}) = 0$

c) $P(E) = 1 - P(\overline{E})$

d) $P(E) - P(\overline{E}) = 0$

e) P(E) + P(not E) = 1

(i) {b,e,c} (ii) {b,e} (iii) {a,c} (iv) {d,a,c} (v) {c,e}

5. A lot of 39 bulbs contain 18 defective ones. One bulb is drawn at random from the lot. Suppose the bulb drawn 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 ?

(i) $\frac{9}{19}$ (ii) $\frac{11}{19}$ (iii) $\frac{11}{20}$ (iv) $\frac{10}{19}$

6. When a card is selected randomly out of a pack of cards, how many elementary events are possible?

(i) 51 (ii) 50 (iii) 52 (iv) 55 (v) 53

7. Two unbiased coins are tossed simultaneously. Find the probability of getting exactly one head.

(i) $\frac{2}{3}$ (ii) $\frac{1}{2}$ (iii) $\frac{5}{6}$ (iv) $\frac{4}{5}$ (v) $\frac{3}{4}$

8. An unbiased die is thrown once. Find the probability of getting a 1?

(i) $\frac{1}{6}$ (ii) $\frac{2}{7}$ (iii) 0 (iv) $\frac{5}{6}$ (v) $\frac{1}{3}$

9. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is a hearts?

(i) $\frac{1}{26}$ (ii) $\frac{3}{13}$ (iii) $\frac{1}{52}$ (iv) $\frac{1}{4}$ (v) $\frac{1}{13}$

10. A die is thrown 90 times. Prime numbers appeared on the upper face 60 times. If a die is thrown at random, what is the probability of getting a prime number?

(i) $\frac{1}{3}$ (ii) $\frac{2}{3}$ (iii) $\frac{3}{4}$ (iv) 1

11. Three unbiased coins are tossed simultaneously. Find the probability of getting at least two heads.

(i) $\frac{3}{4}$ (ii) $\frac{5}{6}$ (iii) $\frac{4}{5}$ (iv) $\frac{1}{2}$ (v) $\frac{2}{3}$

12. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '4' of black suit ?

(i) $\frac{1}{52}$ (ii) $\frac{1}{13}$ (iii) $\frac{3}{13}$ (iv) $\frac{1}{26}$ (v) $\frac{1}{4}$

13. Priyanka and Hamida are friends. What is the probability that both will have different birthdays? (ignoring a leap year).

(i) $\frac{365}{366}$ (ii) $\frac{1}{365}$ (iii) $\frac{363}{365}$ (iv) $\frac{364}{365}$ (v) 1

14. The following table shows the blood-groups of 342 students of a class.

| **Blood group** | O | AB | A | B |
|---|---|---|---|---|
| **Number of students** | 63 | 81 | 90 | 108 |

One student of the class is choosen at random. What is the probability that the choosen student has blood group 'B' ?

(i) $\frac{7}{19}$ (ii) $\frac{13}{19}$ (iii) $\frac{7}{20}$ (iv) $\frac{6}{19}$ (v) $\frac{5}{19}$

15. An unbiased die is thrown once. Find the probability of getting a number between 3 and 5?

(i) $\frac{5}{6}$ (ii) $\frac{2}{7}$ (iii) 0 (iv) $\frac{1}{6}$ (v) $\frac{1}{3}$

16. Three unbiased coins are tossed simultaneously. Find the probability of getting at least one head.

(i) 1 (ii) $\frac{1}{8}$ (iii) $\frac{3}{4}$ (iv) $\frac{7}{8}$ (v) $\frac{8}{9}$

17. A coin is tossed 100 times and tail appears 45 times. If the coin is tossed again, what is the probability of getting a head?

(i) $\frac{1}{2}$ (ii) $\frac{9}{20}$ (iii) $\frac{3}{5}$ (iv) $\frac{11}{20}$ (v) $\frac{4}{7}$

18. There are 54 students in a class room of whom 26 are boys and 28 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a girl ?

(i) $\frac{5}{9}$ (ii) $\frac{15}{28}$ (iii) $\frac{13}{27}$ (iv) $\frac{14}{27}$

19. In a lottery, there are 28 prizes and 16 blanks. What is the probability of getting a prize?

(i) $\frac{8}{11}$ (ii) $\frac{4}{11}$ (iii) $\frac{7}{11}$ (iv) $\frac{6}{11}$ (v) $\frac{2}{3}$

20. An unbiased die is thrown once. Find the probability of getting a number greater than 2?

(i) $\frac{1}{3}$ (ii) 1 (iii) $\frac{3}{4}$ (iv) $\frac{2}{3}$

21. 73 cards are numbered 1,2,3,....73 and put in a box and mixed thoroughly. A card is drawn at random. What is the probability that the number on the drawn card is a prime number?

(i) $\frac{20}{73}$ (ii) $\frac{52}{73}$ (iii) $\frac{11}{37}$ (iv) $\frac{21}{73}$ (v) $\frac{22}{73}$

22. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is a red ace?

(i) $\frac{1}{26}$ (ii) $\frac{3}{13}$ (iii) $\frac{1}{13}$ (iv) $\frac{1}{4}$ (v) $\frac{1}{52}$

23. A box contains 30 discs which are numbered from 1 to 30. If one disc is drawn at random from the box, find the probability that it bears a perfect square number.

(i) 0 (ii) $\frac{5}{6}$ (iii) $\frac{1}{6}$ (iv) $\frac{1}{3}$ (v) $\frac{2}{7}$

24. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is a face card ?

(i) $\frac{1}{4}$ (ii) $\frac{1}{52}$ (iii) $\frac{1}{26}$ (iv) $\frac{3}{13}$ (v) $\frac{1}{13}$

25. A carton consist of 74 shirts of which 66 are good, 6 have minor defects and 2 have major defects. Sharan, a trader, will only accept the shirts which are good, but Kamala, another trader, will only reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the probability that it is acceptable to Sharan?

(i) $\frac{34}{37}$ (ii) $\frac{33}{37}$ (iii) $\frac{4}{37}$ (iv) $\frac{32}{37}$ (v) $\frac{17}{19}$

## Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (iii) | 2) (i) | 3) (v) | 4) (v) | 5) (iv) | 6) (iii) |
| 7) (ii) | 8) (i) | 9) (iv) | 10) (ii) | 11) (iv) | 12) (iv) |
| 13) (iv) | 14) (iv) | 15) (iv) | 16) (iv) | 17) (iv) | 18) (iv) |
| 19) (iii) | 20) (iv) | 21) (iv) | 22) (i) | 23) (iii) | 24) (iv) |
| 25) (ii) | | | | | |