EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Probability

Grade : CBSE Grade X

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

   (i) 53 (ii) 52 (iii) 54 (iv) 50 (v) 51

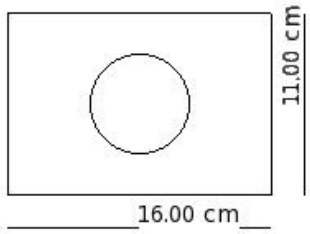
2. A die is thrown twice. What is the probability that 6 will come up atleast once?

   (i) $\frac{25}{36}$ (ii) $\frac{1}{3}$ (iii) $\frac{5}{18}$ (iv) $\frac{11}{36}$ (v) $\frac{12}{37}$

3. Three unbiased coins are tossed simultaneously. Find the probability of getting at most one head.

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

4. Suppose a die is thrown on a rectangular region as shown below. What is the probability that it will land inside the circle of diameter 6.00 cm?



   (i) $\frac{5}{28}$ (ii) $\frac{47}{56}$ (iii) $\frac{10}{57}$ (iv) $\frac{1}{7}$ (v) $\frac{9}{56}$

5. Which of the following experiments have equally likely outcomes?

   a) A true/false question is attempted. The answer is either right or wrong
   b) A baby is born. It is a boy or girl
   c) A ball is hit. It reaches the boundary or not
   d) A man throws a die. The number on the top is either 4 or not 4
   e) A man starts his vehicle. It starts or it does not starts

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

6. 60 cards are numbered 1,2,3,....60 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 greater then 10?

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

7. Two players Anjali and Fathima play a tennis match. It is known that the probability of Anjali winning the match is 0.14. What is the probability of Fathima winning the match?

   (i) $\frac{43}{50}$ (ii) $\frac{22}{25}$ (iii) $\frac{44}{51}$ (iv) $\frac{21}{25}$ (v) $\frac{7}{50}$

8. Two unbiased coins are tossed simultaneously. Find the probability of getting at least two heads.

   (i) $\frac{1}{4}$ (ii) $\frac{1}{2}$ (iii) 0 (iv) $\frac{2}{5}$ (v) $\frac{3}{4}$

9. A coin is tossed 100 times and head appears 50 times. If the coin is tossed again, what is the probability of getting a tail?

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

10. 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 king?

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

11. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is either a black card or a queen?

(i) $\frac{3}{13}$ (ii) $\frac{7}{13}$ (iii) $\frac{1}{52}$ (iv) $\frac{1}{13}$ (v) $\frac{1}{26}$

12. A die is thrown 385 times with the frequencies for outcomes 1, 2, 3, 4, 5 and 6 as given in the following table

Outcome	1	2	3	4	5	6
Frequency	40	45	65	70	75	90

If the die is thrown again randomly, find the probability of getting 3 as outcome.

(i) $\frac{2}{11}$ (ii) $\frac{64}{77}$ (iii) $\frac{12}{77}$ (iv) $\frac{7}{39}$ (v) $\frac{13}{77}$

13. Two unbiased coins are tossed simultaneously. Find the probability of getting at least one head.

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

14. Kareena and Keerthi are friends. What is the probability that both will have different birthdays? (ignoring a leap year).

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

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

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

16. A carton consist of 83 shirts of which 64 are good, 14 have minor defects and 5 have major defects. Sai, a trader, will only accept the shirts which are good, but Rita, 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 Sai?

(i) $\frac{65}{84}$ (ii) $\frac{19}{83}$ (iii) $\frac{63}{83}$ (iv) $\frac{64}{83}$ (v) $\frac{65}{83}$

17. Two unbiased dice are thrown simultaneously. Find the probability of getting at least 10 as the sum of the two numbers on the dice.

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

18. What is the probability of an impossible event?

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

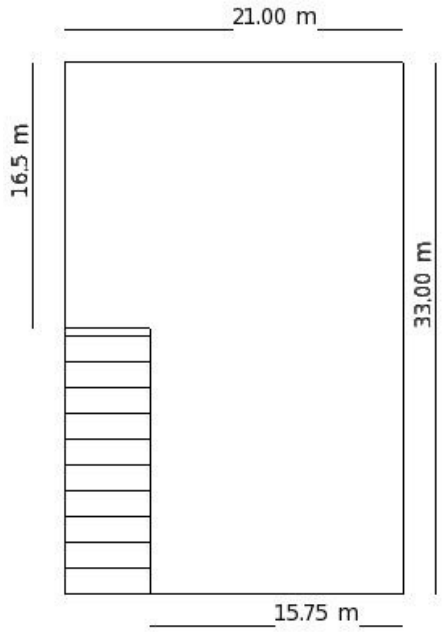
19. 63 cards are numbered 1,2,3,....63 and put in a box and mixed thoroughly. A card is drawn at random. What is the probability that the number on the drawn card is a prime number?

(i) $\frac{3}{7}$ (ii) $\frac{3}{8}$ (iii) $\frac{2}{7}$ (iv) $\frac{5}{7}$ (v) $\frac{1}{7}$

20. A bag contains 36 yellow marbles, 12 blue marbles, 32 gray marbles and 24 red marbles. One marble is drawn at random from the bag. Find the probability that the marble drawn is red or gray.

(i) $\frac{4}{7}$ (ii) $\frac{7}{13}$ (iii) $\frac{6}{13}$ (iv) $\frac{8}{13}$

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

22. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '7' of red suit ?

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

23. A lot of 26 bulbs contain 12 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) $\frac{13}{25}$ (ii) $\frac{14}{25}$ (iii) $\frac{7}{13}$ (iv) $\frac{12}{25}$

24. Trisha and Dolly are friends. What is the probability that both will have same birthdays? (ignoring a leap year).

(i) $\frac{2}{365}$ (ii) 0 (iii) $\frac{364}{365}$ (iv) $\frac{1}{183}$ (v) $\frac{1}{365}$

25. A lot of 38 bulbs contain 12 defective ones. One bulb is drawn at random from the lot. What is the probability that this bulb is defective ?

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

Assignment Key

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