EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Probability

Grade : CBSE Grade X

1. Which of the following are true?

   a) For an event E, we have $0 \leq P(E) \leq 1$
   b) The probability of an imposible event can be > 1
   c) The probability of an impossible event is 1
   d) The probability of an unsure event is 0
   e) The probability of a sure event is 1

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

2. A box contains 18 orange marbles, 39 gray marbles, 9 yellow marbles and 18 blue marbles. One marble is drawn at random from the box. Find the probability that the marble drawn is orange or yellow.

   (i) $\frac{10}{29}$ (ii) $\frac{19}{28}$ (iii) $\frac{9}{28}$ (iv) $\frac{2}{7}$ (v) $\frac{5}{14}$

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

4. If $P(E) = 0.75$, find $P(\overline{E})$

   (i) 8.25 (ii) 1.25 (iii) 0.25 (iv) 2.25 (v) 7.25

5. Which of the following are true?

   a) $P(E) - P(\overline{E}) = 0$
   b) $P(E) = 1 - P(\overline{E})$
   c) $P(E) + P(\overline{E}) = 0$
   d) P(E) + P(not E) = 1
   e) P(E) - P(not E) = 0

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

6. Which of the following are true?

   a) Probability of getting 101 marks out of 100 is 1.01
   b) If the probability of failing the exam is 0.67, the probability of passing the exam is 0.33
   c) If the probability is too less, it will become negative
   d) The probability of an event that cannot happen is unknown
   e) The probability of an event that is very likely to happen is 1

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

7. A coin is tossed 60 times and head appears 30 times. If the coin is tossed again, what is the probability of getting a tail?

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

8. A bag contains 16 red marbles, 30 gray marbles, 6 orange marbles and 16 pink marbles. One marble is drawn at random from the bag. Find the probability that the marble drawn is not pink.

(i) $\frac{12}{17}$ (ii) $\frac{4}{17}$ (iii) $\frac{13}{17}$ (iv) $\frac{14}{17}$ (v) $\frac{7}{9}$

9. Two unbiased dice are thrown simultaneously. Find the probability of getting at least 3 as the sum of the two numbers on the dice.

(i) $\frac{17}{18}$ (ii) $\frac{35}{36}$ (iii) $\frac{1}{36}$ (iv) $\frac{36}{37}$ (v) 1

10. There are 70 students in a class room of whom 30 are boys and 40 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a boy ?

(i) $\frac{3}{7}$ (ii) $\frac{4}{7}$ (iii) $\frac{1}{2}$ (iv) $\frac{2}{7}$

11. 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?

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

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

a) A man throws a die. The number on the top is either 6 or not 6
b) A ball is hit. It reaches the boundary or not
c) A true/false question is attempted. The answer is either right or wrong
d) A baby is born. It is a boy or girl
e) A man starts his vehicle. It starts or it does not starts

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

13. A die is thrown 50 times. Prime numbers appeared on the upper face 30 times. If a die is thrown at random, what is the probability of getting a prime number?

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

14. Three unbiased coins are tossed simultaneously. Find the probability of getting exactly one head.

(i) $\frac{3}{8}$ (ii) $\frac{1}{2}$ (iii) $\frac{1}{4}$ (iv) $\frac{4}{9}$ (v) $\frac{5}{8}$

15. A die is thrown twice. What is the probability that 1 will come atleast once?

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

16. A die is thrown twice. What is the probability that 5 will come up atleast once?

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

17. Two unbiased coins are tossed simultaneously. Find the probability of getting at most one head.

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

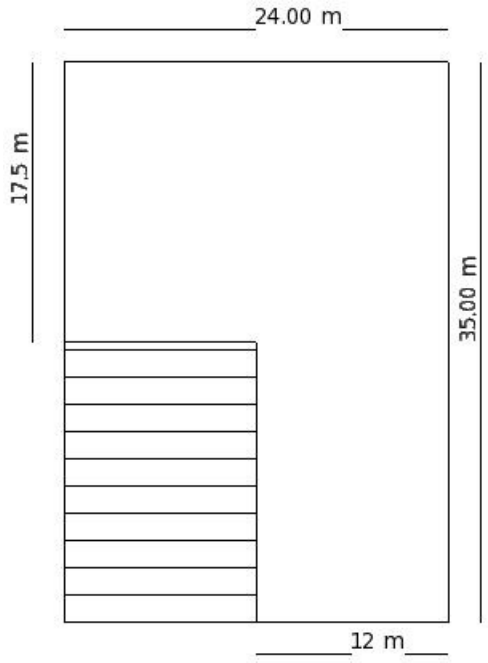
18. In a lottery, there are 21 prizes and 10 blanks. What is the probability of not getting a prize?

(i) $\frac{21}{31}$ (ii) $\frac{10}{31}$ (iii) $\frac{11}{31}$ (iv) $\frac{11}{32}$ (v) $\frac{9}{31}$

19. A bag contains 6 blue marbles, 26 pink marbles, 14 yellow marbles and 4 orange marbles. One marble is drawn at random from the bag. Find the probability that the marble drawn is yellow.

(i) $\frac{18}{25}$ (ii) $\frac{4}{13}$ (iii) $\frac{8}{25}$ (iv) $\frac{7}{25}$ (v) $\frac{6}{25}$

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

21. 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 red card or a king?

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

22. A survey of 150 men showed that only 110 of them know English. Out of these men, if one is selected at random, what is the probability that the selected man knows English?

(i) $\frac{4}{15}$ (ii) $\frac{11}{15}$ (iii) $\frac{3}{4}$ (iv) $\frac{2}{3}$ (v) $\frac{4}{5}$

23. A carton consist of 68 shirts of which 55 are good, 12 have minor defects and 1 have major defects. Satish, a trader, will only accept the shirts which are good, but Vimala, 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 Satish?

(i) $\frac{56}{69}$ (ii) $\frac{14}{17}$ (iii) $\frac{13}{68}$ (iv) $\frac{55}{68}$ (v) $\frac{27}{34}$

24. Three unbiased coins are tossed simultaneously. Find the probability of getting no head.

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

25. When two dice are thrown simultaneously, how many elementary events are possible?

(i) 35 (ii) 39 (iii) 36 (iv) 33 (v) 37

Assignment Key

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