EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Probability

Grade : SSC Grade X

1. Which of the following are possible values of probability?

   a) 3

   b) 0.67

   c) $\frac{8}{5}$

   d) $\frac{1}{8}$

   e) -4.3

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

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

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

3. A box contains 60 discs which are numbered from 1 to 60. If one disc is drawn at random from the box, find the probability that it bears a perfect square number.

   (i) $\frac{7}{60}$ (ii) $\frac{53}{60}$ (iii) $\frac{1}{10}$ (iv) $\frac{2}{15}$ (v) $\frac{8}{61}$

4. In a lottery, there are 19 prizes and 20 blanks. What is the probability of not getting a prize?

   (i) $\frac{7}{13}$ (ii) $\frac{21}{40}$ (iii) $\frac{19}{39}$ (iv) $\frac{20}{39}$

5. 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) $\frac{1}{13}$ (v) $\frac{3}{13}$

6. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '6' of hearts?

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

7. Three coins are tossed simultaneously 215 times with the following frequencies of different outcomes :

Outcome	3 heads	2 heads	1 heads	No heads
Frequency	30	50	65	70

   If the three coins are simultaneously tossed again, compute the probability of '2 heads' coming up.

   (i) $\frac{9}{43}$ (ii) $\frac{33}{43}$ (iii) $\frac{1}{4}$ (iv) $\frac{11}{43}$ (v) $\frac{10}{43}$

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

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

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

10. A bag contains 6 black balls, 27 gray balls, 15 white balls and 18 orange balls. One ball is drawn at random from the bag. Find the probability that the ball drawn is not orange.

(i) $\frac{7}{11}$ (ii) $\frac{8}{11}$ (iii) $\frac{3}{11}$ (iv) $\frac{9}{11}$ (v) $\frac{3}{4}$

11. The distances (in km) of engineers from their residence to their place of work were found as follows
8 25 2 22 11 13 6 1 26 23 6 30 7
What is the empirical probability that an engineer lives greater than 22 km from her place of work?

(i) $\frac{9}{13}$ (ii) $\frac{5}{13}$ (iii) $\frac{5}{14}$ (iv) $\frac{3}{13}$ (v) $\frac{4}{13}$

12. Which of the following are true?

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

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

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

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

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

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

15. A box contains 42 pink balls, 9 yellow balls, 36 gray balls and 6 blue balls. One ball is drawn at random from the box. Find the probability that the ball drawn is blue or gray.

(i) $\frac{15}{31}$ (ii) $\frac{15}{32}$ (iii) $\frac{17}{31}$ (iv) $\frac{13}{31}$ (v) $\frac{14}{31}$

16. Two players Kamala and Swathi play a tennis match. It is known that the probability of Kamala winning the match is 0.50. What is the probability of Swathi winning the match?

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

17. A die is thrown twice. What is the probability that 1 will not come up either time?

(i) $\frac{11}{36}$ (ii) $\frac{13}{18}$ (iii) $\frac{25}{36}$ (iv) $\frac{26}{37}$ (v) $\frac{2}{3}$

18. There are 78 students in a class room of whom 38 are boys and 40 are girls. From these students, one is choosen at random. What is the probability that the choosen student is a girl ?

(i) $\frac{7}{13}$ (ii) $\frac{19}{39}$ (iii) $\frac{21}{40}$ (iv) $\frac{20}{39}$

19. 72 cards are numbered 1,2,3,....72 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 an odd number?

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

20. A single unbiased coin is tossed. Find the probability of getting a head.

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

21. What is the probability of a sure event?

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

22. Two unbiased dice are thrown simultaneously. Find the probability of getting 11 as the sum of the two numbers on the dice.

(i) $\frac{1}{18}$ (ii) $\frac{1}{9}$ (iii) 0 (iv) $\frac{17}{18}$ (v) $\frac{2}{19}$

23. A survey of 100 men showed that only 80 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) $\frac{1}{5}$ (ii) $\frac{3}{5}$ (iii) $\frac{4}{5}$ (iv) 1 (v) $\frac{5}{6}$

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 red ace?

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

25. The following table shows the blood-groups of 252 students of a class.

Blood group	B	A	O	AB
Number of students	45	54	72	81

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

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

Assignment Key

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