EduSahara™ Assignment

Name : Probability1

Chapter : Probability

Grade : ICSE Grade X

1. A coin is tossed 90 times and tail appears 30 times. If the coin is tossed again, what is the probability of getting a head?

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

2. A coin is tossed 90 times and head appears 70 times. If the coin is tossed again, what is the probability of getting a tail?

(i) $\frac{1}{3}$ (ii) $\frac{2}{9}$ (iii) $\frac{7}{9}$ (iv) $\frac{3}{10}$ (v) $\frac{1}{9}$

3. Two coins are tossed simultaneously 80 times and it was observed that both heads appeared 25 times. If two coins are tossed simultaneously at random, what is the probability of getting both heads?

(i) $\frac{5}{16}$ (ii) $\frac{11}{16}$ (iii) $\frac{1}{4}$ (iv) $\frac{6}{17}$ (v) $\frac{3}{8}$

4. Two coins are tossed simultaneously 40 times and it was observed that both tails appeared 30 times. If two coins are tossed simultaneously at random, what is the probability of getting both tails?

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

5. A die is thrown 110 times. Prime numbers appeared on the upper face 90 times. If a die is thrown at random, what is the probability of getting a prime number?

(i) $\frac{9}{11}$ (ii) $\frac{8}{11}$ (iii) $\frac{10}{11}$ (iv) $\frac{5}{6}$ (v) $\frac{2}{11}$

6. A survey of 150 men showed that only 70 of them know French. Out of these men, if one is selected at random, what is the probability that the selected man knows French?

(i) $\frac{7}{15}$ (ii) $\frac{8}{15}$ (iii) $\frac{2}{5}$ (iv) $\frac{1}{2}$

7. On a particular day, at a crossing in a city, the various types of 165 vehicles going past during a time-interval were observed as under:

Type of Vehicle	Three-wheeler	Two-wheeler	Four-wheeler
Frequency	40	60	65

Out of these vehicles, if one is choosen at random, what is the probability that the choosen vehicle is a 'Four-wheeler' ?

(i) $\frac{20}{33}$ (ii) $\frac{14}{33}$ (iii) $\frac{7}{17}$ (iv) $\frac{4}{11}$ (v) $\frac{13}{33}$

8. The following table shows the blood-groups of 459 students of a class.

Blood group	B	O	A	AB
Number of students	45	117	126	171

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

(i) $\frac{46}{51}$ (ii) $\frac{4}{51}$ (iii) $\frac{3}{26}$ (iv) $\frac{2}{17}$ (v) $\frac{5}{51}$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20. Two unbiased dice are thrown simultaneously. Find the probability of getting a doublet.

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

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

(i) $\frac{11}{12}$ (ii) $\frac{1}{12}$ (iii) $\frac{1}{6}$ (iv) 0 (v) $\frac{2}{13}$

22. Two unbiased dice are thrown simultaneously. Find the probability of getting at least 8 as the sum of the two numbers on the dice.

(i) $\frac{6}{13}$ (ii) $\frac{1}{3}$ (iii) $\frac{5}{12}$ (iv) $\frac{7}{12}$ (v) $\frac{1}{2}$

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

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

24. A die is thrown twice. What is the probability that 6 will not come up either time?

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

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

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

26. 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 jack?

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

27. 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 spades?

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

28. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '3' of clubs?

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

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

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

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

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

32. 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 jack?

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

33. An unbiased die is thrown once. Find the probability of getting a prime number?

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

34. An unbiased die is thrown once. Find the probability of getting an even number?

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

35. An unbiased die is thrown once. Find the probability of getting a 4?

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

36. An unbiased die is thrown once. Find the probability of getting a number greater than 3?

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

37. An unbiased die is thrown once. Find the probability of getting a number less than 5?

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

38. An unbiased die is thrown once. Find the probability of getting a number between 3 and 6?

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

39. When two coins are tossed simultaneously, how many elementary events are possible?

(i) 5 (ii) 4 (iii) 6 (iv) 3 (v) 2

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

(i) 33 (ii) 37 (iii) 38 (iv) 36 (v) 35

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

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

42. What is the probability of a sure event?

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

43. What is the probability of an impossible event?

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

44. Which of the following are true?

a) If the probability is too less, it will become negative
b) If the probability of failing the exam is 0.56, the probability of passing the exam is 0.44
c) The probability of an event that cannot happen is unknown
d) Probability of getting 105 marks out of 100 is 1.05
e) The probability of an event that is very likely to happen is 1

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

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

a) A man starts his vehicle. It starts or it does not starts
b) A true/false question is attempted. The answer is either right or wrong
c) A man throws a die. The number on the top is either 5 or not 5
d) A ball is hit. It reaches the boundary or not
e) A baby is born. It is a boy or girl

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

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

a) $\frac{5}{3}$
b) 3
c) -4.5
d) $\frac{1}{2}$
e) 0.33

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

47. If $P(E) = 0.67$, find $P(\overline{E})$

(i) 7.33 (ii) 8.33 (iii) 2.33 (iv) 0.33 (v) 1.33

48. Which of the following are true?

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

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

49. Which of the following are true?

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

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

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

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

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

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

50. A die is thrown 470 times. The number 5 appears on the upper face 62 times. Now the die is thrown at random. What is the probability of getting a 5 ?

(i) $\frac{6}{47}$ (ii) $\frac{32}{235}$ (iii) $\frac{204}{235}$ (iv) $\frac{8}{59}$ (v) $\frac{31}{235}$

51. A die is thrown twice. What is the probability that 2 will not come up either time?

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

52. A die is thrown twice. What is the probability that 3 will come atleast once?

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

Assignment Key

1) (i)	2) (ii)	3) (i)	4) (iv)	5) (i)	6) (i)
7) (v)	8) (v)	9) (i)	10) (ii)	11) (i)	12) (iii)
13) (ii)	14) (iv)	15) (ii)	16) (iv)	17) (i)	18) (iv)
19) (i)	20) (i)	21) (ii)	22) (iii)	23) (v)	24) (iii)
25) (iv)	26) (iv)	27) (iii)	28) (iii)	29) (i)	30) (v)
31) (i)	32) (v)	33) (v)	34) (ii)	35) (v)	36) (ii)
37) (iv)	38) (i)	39) (ii)	40) (iv)	41) (v)	42) (iv)
43) (i)	44) (iv)	45) (iii)	46) (i)	47) (iv)	48) (iii)
49) (iv)	50) (v)	51) (ii)	52) (ii)		