

**EduSahara™ Learning Center Assignment****Grade : Class X, ICSE****Chapter : Probability****Name : Probability1**

1. A coin is tossed 100 times and tail appears 35 times. If the coin is tossed again, what is the probability of getting a head?

(i)  $\frac{7}{20}$  (ii)  $\frac{3}{5}$  (iii)  $\frac{7}{10}$  (iv)  $\frac{2}{3}$  (v)  $\frac{13}{20}$

2. A coin is tossed 100 times and head appears 30 times. If the coin is tossed again, what is the probability of getting a tail?

(i)  $\frac{7}{10}$  (ii)  $\frac{8}{11}$  (iii)  $\frac{3}{5}$  (iv)  $\frac{3}{10}$  (v)  $\frac{4}{5}$

3. Two coins are tossed simultaneously 70 times and it was observed that both heads appeared 35 times. If two coins are tossed simultaneously at random, what is the probability of getting both heads?

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

4. Two coins are tossed simultaneously 100 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)  $\frac{3}{10}$  (ii)  $\frac{1}{5}$  (iii)  $\frac{4}{11}$  (iv)  $\frac{2}{5}$  (v)  $\frac{7}{10}$

5. A die is thrown 130 times. Prime numbers appeared on the upper face 55 times. If a die is thrown at random, what is the probability of getting a prime number?

(i)  $\frac{15}{26}$  (ii)  $\frac{11}{26}$  (iii)  $\frac{6}{13}$  (iv)  $\frac{4}{9}$  (v)  $\frac{5}{13}$

6. A survey of 120 men showed that only 80 of them know Urdu. Out of these men, if one is selected at random, what is the probability that the selected man knows Urdu?

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

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:

7.

Type of Vehicle	Three-wheeler	Four-wheeler	Two-wheeler
Frequency	45	55	65

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

(i)  $\frac{4}{11}$  (ii)  $\frac{2}{11}$  (iii)  $\frac{3}{11}$  (iv)  $\frac{1}{3}$  (v)  $\frac{8}{11}$

The following table shows the blood-groups of 234 students of a class.

8.

Blood group	O	B	AB	A
Number of students	45	54	63	72

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

(i)  $\frac{5}{26}$  (ii)  $\frac{2}{13}$  (iii)  $\frac{2}{6}$  (iv)  $\frac{21}{26}$  (v)  $\frac{3}{13}$

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

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

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

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

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

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

12. 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)  $\frac{3}{4}$
- 

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

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

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

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

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

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

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

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

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)  $\frac{2}{3}$  (iv)  $\frac{4}{5}$  (v)  $\frac{3}{4}$
- 

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

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

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

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

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

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

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

- (i)  $\frac{6}{37}$  (ii)  $\frac{1}{9}$  (iii)  $\frac{31}{36}$  (iv)  $\frac{1}{6}$  (v)  $\frac{5}{36}$
-

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

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

23. A die is thrown twice. What is the probability that 4 will come up atleast once?

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

24. A die is thrown twice. What is the probability that 5 will not come up either time?

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

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 queen?

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

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 black jack?

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

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

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 diamonds?

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

29. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '2' of black suit ?

- (i)  $\frac{1}{26}$  (ii)  $\frac{1}{52}$  (iii)  $\frac{1}{13}$  (iv)  $\frac{1}{4}$  (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 spades?

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

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 queen?

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

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

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

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

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

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

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

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

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

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

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

38. An unbiased die is thrown once. Find the probability of getting a number between 2 and 4?

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

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

- (i) 5 (ii) 4 (iii) 1 (iv) 7 (v) 3

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

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

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

- (i) 51 (ii) 54 (iii) 49 (iv) 53 (v) 52

42. What is the probability of a sure event?

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

43. What is the probability of an impossible event?

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

44. Which of the following are true?

- a) The probability of an event that is very likely to happen is 1  
b) The probability of an event that cannot happen is unknown  
c) If the probability of failing the exam is 0.57, the probability of passing the exam is 0.43  
d) Probability of getting 105 marks out of 100 is 1.05  
e) If the probability is too less, it will become negative  
(i) {c} (ii) {d,e,c} (iii) {a,c} (iv) {b,c}

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

- a) A baby is born, it is a boy or girl  
b) A ball is hit. It reaches the boundary or not  
c) A man starts his vehicle. It starts or it does not start  
d) A man throws a die. The number on the top is either 1 or not 1

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

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

- a)  $\frac{5}{3}$   
b) -1  
c) 0.5  
d) 4  
e)  $\frac{1}{4}$

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

47. If  $P(E) = 0.2$ , find  $P(\bar{E})$

- (i) 7.8 (ii) 1.8 (iii) 2.8 (iv) 0.8 (v) 8.8
- 

48. Which of the following are true?

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

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

49. Which of the following are true?

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

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

50. A die is thrown 480 times. The number 6 appears on the upper face 74 times. Now the die is thrown at random. What is the probability of getting a 6?

- (i)  $\frac{3}{20}$  (ii)  $\frac{19}{120}$  (iii)  $\frac{38}{241}$  (iv)  $\frac{203}{240}$  (v)  $\frac{37}{240}$
- 

51. A die is thrown twice. What is the probability that 4 will not come up either time?

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

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

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

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