1. A coin is tossed 40 times and tail appears 25 times. If the coin is tossed again, what is the probability of getting a head?

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

2. A coin is tossed 70 times and head appears 25 times. If the coin is tossed again, what is the probability of getting a tail?

   (i) $\dfrac{4}{7}$ (ii) $\dfrac{5}{14}$ (iii) $\dfrac{2}{3}$ (iv) $\dfrac{9}{14}$ (v) $\dfrac{5}{7}$

3. Two coins are tossed simultaneously 120 times and it was observed that both heads appeared 80 times. If two coins are tossed simultaneously at random, what is the probability of getting both heads?

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

4. Two coins are tossed simultaneously 40 times and it was observed that both tails appeared 20 times. If two coins are tossed simultaneously at random, what is the probability of getting both tails?

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

5. A die is thrown 120 times. Prime numbers appeared on the upper face 110 times. If a die is thrown at random, what is the probability of getting a prime number?

   (i) 1   (ii) $\dfrac{5}{6}$ (iii) $\dfrac{12}{13}$ (iv) $\dfrac{1}{12}$ (v) $\dfrac{11}{12}$

6. A survey of 70 men showed that only 20 of them know Telugu. Out of these men, if one is selected at random, what is the probability that the selected man knows Telugu?

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

7. On a particular day, at a crossing in a city, the various types of 150 vehicles going past during a time-interval were observed as under:

Type of Vehicle	Two-wheeler	Three-wheeler	Four-wheeler
Frequency	45	50	55

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

   (i) $\dfrac{1}{5}$ (ii) $\dfrac{4}{11}$ (iii) $\dfrac{7}{10}$ (iv) $\dfrac{2}{5}$ (v) $\dfrac{3}{10}$

The following table shows the blood-groups of 270 students of a class.

8.

Blood group	B	AB	O	A
Number of students	45	54	72	99

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

(i) $\dfrac{2}{5}$ (ii) $\dfrac{19}{30}$ (iii) $\dfrac{12}{31}$ (iv) $\dfrac{11}{30}$ (v) $\dfrac{1}{3}$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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22. Two unbiased dice are thrown simultaneously. Find the probability of getting at least 5 as the sum of the two numbers on the dice.

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

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

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

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

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

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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 jack?

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

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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 queen?

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

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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 king of spades?

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

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28. One card is drawn at random from a well shuffled deck of 52 cards. What is the probability that the card drawn is '8' of hearts?

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

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29. 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 red suit ?

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

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

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

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 black card or a jack?

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

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

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

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

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

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

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

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

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

37. An unbiased die is thrown once. Find the probability of getting a number less than 2?

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

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

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

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

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

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

(i) 35 (ii) 36 (iii) 37 (iv) 34 (v) 38

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

(i) 52 (ii) 49 (iii) 55 (iv) 51 (v) 53

42. What is the probability of a sure event?

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

43. What is the probability of an impossible event?

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

44. Which of the following are true?

    a) If the probability is too less, it will become negative
    b) The probability of an event that cannot happen is unknown
    c) If the probability of failing the exam is 0.2, the probability of passing the exam is 0.8
    d) Probability of getting 109 marks out of 100 is 1.09
    e) The probability of an event that is very likely to happen is 1

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

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

    a) A man throws a die. The number on the top is either 1 or not 1
    b) A baby is born. It is a boy or girl
    c) A true/false question is attempted. The answer is either right or wrong
    d) A ball is hit. It reaches the boundary or not
    e) A man starts his vehicle. It starts or it does not starts

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

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

    a) $\dfrac{9}{7}$
    b) 0.17
    c) -2
    d) 2
    e) $\dfrac{5}{8}$

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

47. If $P(E) = 0.25$, find $P(\bar{E})$

    (i) 1.75 (ii) 7.75 (iii) 8.75 (iv) 2.75 (v) 0.75

48. Which of the following are true?

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

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

49. Which of the following are true?

a) $P(E) + P(\bar{E}) = 0$

b) $P(E) + P(\text{not } E) = 1$

c) $P(E) = 1 - P(\bar{E})$

d) $P(E) - P(\bar{E}) = 0$

e) $P(E) - P(\text{not } E) = 0$

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

50. A die is thrown 370 times. The number 3 appears on the upper face 70 times. Now the die is thrown at random. What is the probability of getting a 3 ?

(i) $\dfrac{4}{19}$ (ii) $\dfrac{7}{37}$ (iii) $\dfrac{6}{37}$ (iv) $\dfrac{8}{37}$ (v) $\dfrac{30}{37}$

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

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

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

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

Assignment Key

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