EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Probability

Grade : SSC Grade IX

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1. Two coins are tossed simultaneously 60 times and it was observed that both tails appeared 25 times. If two coins are tossed simultaneously at random, what is the probability of getting both tails?

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

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

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

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

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

4. A box contains 15 blue marbles, 30 red marbles, 3 white marbles and 36 pink marbles. One marble is drawn at random from the box. Find the probability that the marble drawn is blue.

   (i) $\frac{1}{7}$ (ii) $\frac{5}{28}$ (iii) $\frac{6}{29}$ (iv) $\frac{3}{14}$ (v) $\frac{23}{28}$

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

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

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

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

7. A survey of 100 men showed that only 35 of them know Hindi. Out of these men, if one is selected at random, what is the probability that the selected man knows Hindi?

   (i) $\frac{8}{21}$ (ii) $\frac{13}{20}$ (iii) $\frac{3}{10}$ (iv) $\frac{7}{20}$ (v) $\frac{2}{5}$

8. A game consists of tossing a coin 3 times and noting its outcome each time. Abhishek wins if all the tosses give the same result i.e., three heads or three tails, and loses otherwise. Calculate the probability that Abhishek will lose the game.

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

9. A die is thrown 380 times. The number 1 appears on the upper face 76 times. Now the die is thrown at random. What is the probability of getting a 1 ?

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

10. An unbiased die is thrown once. Find the probability of getting a number greater than 1?

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

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

a) A man throws a die. The number on the top is either 2 or not 2
b) A man starts his vehicle. It starts or it does not starts
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 ball is hit. It reaches the boundary or not

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

12. Two unbiased dice are thrown simultaneously. Find the probability of getting 6 as the sum of the two numbers on the dice.

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

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

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

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

15. 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 red suit ?

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

16. 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) $\frac{1}{2}$ (v) $\frac{3}{4}$

17. A lot of 20 bulbs contain 2 defective ones. One bulb is drawn at random from the lot. Suppose the bulb drawn is not defective and is not replaced. Now one bulb is drawn at random from the rest. What is the probability that this bulb is not defective ?

(i) $\frac{18}{19}$ (ii) $\frac{9}{10}$ (iii) $\frac{17}{19}$ (iv) $\frac{16}{19}$ (v) $\frac{2}{19}$

18. A box contains 6 black marbles, 45 pink marbles, 42 yellow marbles and 12 red marbles. One marble is drawn at random from the box. Find the probability that the marble drawn is neither pink nor yellow.

(i) $\frac{7}{36}$ (ii) $\frac{29}{35}$ (iii) $\frac{6}{35}$ (iv) $\frac{1}{5}$ (v) $\frac{1}{7}$

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

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

20. 82 cards are numbered 1,2,3,....82 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 less then 21?

(i) $\frac{11}{41}$ (ii) $\frac{9}{41}$ (iii) $\frac{31}{41}$ (iv) $\frac{11}{42}$ (v) $\frac{10}{41}$

21. Which of the following are true?

a) If the probability of failing the exam is 0.67, the probability of passing the exam is 0.33
b) Probability of getting 103 marks out of 100 is 1.03
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) {c,a} (ii) {b,a} (iii) {d,e,a} (iv) {a}

22. 58 cards are numbered 1,2,3,....58 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 greater then 24?

(i) $\frac{12}{29}$ (ii) $\frac{18}{29}$ (iii) $\frac{16}{29}$ (iv) $\frac{3}{5}$ (v) $\frac{17}{29}$

23. On a particular day, at a crossing in a city, the various types of 110 vehicles going past during a time-interval were observed as under:

Type of Vehicle	Three-wheeler	Two-wheeler	Four-wheeler
Frequency	25	30	55

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

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

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 black ace?

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

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

a) $\frac{3}{5}$
b) 3
c) 0.67
d) -2.2
e) $\frac{9}{2}$

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

Assignment Key

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