

INTERNATIONAL INDIAN SCHOOL BURAI DAH
WORKSHHET: PROBABILITY
CLASS:11-(2024-25)

- 1-What is the probability that a given two-digit number is divisible by 15. **Ans: 1/15**
- 2-If A and B are mutually exclusive events of an experiment. If $P(\text{not } A) = 0.65$, $P(A \cup B) = 0.65$ and $P(B) = p$, then find the value of p **Ans: p = 0.30**
- 3-In single throw of two dice, determine the probability of getting a total of 7 or 9 **Ans:5/11**
- 4-Three identical dice are rolled. What is the probability that the same number will appear on each of them ? **Ans: 1/6**
- 5-A bag contains 5 brown and 4 white socks. Ram pulls out two socks.What is the probability that both the socks are of the same colour. **Ans: 4/9**
- 6-A coin is tossed twice , what is the probability that at least one tails occurs ? **Ans: 3/4**
- 7-Fair coin with 1 marked on one face and 6 on the other and a die are both tossed.find the probability that the sum of numbers that turn up (i) 3 (ii) 12 **Ans: (i) 1/12 ,(ii) 1/12**
- 8-Three coins are tossed once Find the probability of getting (i) 3 heads (ii) 2 heads (iii) atleast 2 heads (iv) atmost 3 heads (v) no head , (vi) 3 tails (vii) exactly two tails (viii) no tail (ix) atmost two tails.
Ans: (i) 1/8 , (ii) 3/8 , (iii) 1/2 , (iv) 7/8 , (v) 1/8 , (vi) 1/8 , (vii) 3/8 , (viii) 1/8 (ix) 7/8
- 9-If $3/11$ is the probability of an event, what is the probability of the event 'Not A' **Ans: 8/11**
- 10-A letter is chosen at random from the word 'Assassination' .Find the probability that letter is (i) vowel (ii) a consonant **Ans: (i) 6/13 (ii) 7/13**
- 11-Given $P(A) = \frac{3}{5}$ and $P(B) = \frac{1}{5}$ Find $P(A \text{ or } B)$, if A , B are mutually exclusive events.
Ans: $P(A \text{ or } B) = 4/5$
- 12-If E and F are events such that $P(E) = \frac{1}{4}$ $P(F) = \frac{1}{2}$ and $P(E \text{ and } F) = 1/8$, find (i) $P(E \text{ or } F)$ (ii) $P(\text{not } E \text{ and not } F)$ **Ans: (i) 5/8 , (ii) 3/8**
- 13-A and B are events such that $P(A) = 0.42$, $P(B) = 0.48$ and $P(A \text{ and } B) = 0.16$ determine
(i) $P(\text{not } A)$ (ii) $P(\text{not } B)$, (iii) $P(A \text{ or } B)$ **Ans: (i) 0.58 , (ii) 0.52 (iii) 0.74**
- 14-In Class XI of a school 40% of the students study mathematics and 30 % study Biology and 10 % of the class study both mathematics and a Biology if a student is selected at random from the class, find the probability that he will be studying mathematics or Biology . **Ans: 0.6**

15- Out of 100 students two sections of 40 and 60 are formed.If you and your friend are among the 100 students , what is the probability that (i) You both enter the same sections? (ii) You both enter the different sections. **Ans: (i) 17/33 (ii) 16/33**

16- A and B are two events such that $P(A) = 0.54$, $P(B) = 0.69$, $P(A \cap B) = 0.35$
find (i) $P(A \cup B)$ (ii) $P(A \cap B')$ (iii) $P(B \cap A')$
Ans: (i) 0.88 (ii) 0.19 (iii) 0.34

17-If the letters of the word ' ALGORITHM ' are arranged at random in a row what is the probability the letter 'GOR' must remain together as a unit ? **Ans: 1/72**

18- The number lock of a suitcase has 4 wheels ,each labelled with ten digits i.e , from 0 to 9.The lock opens with sequence of four digits with no repeats .what is the probability of a person getting the right sequence to open the suitcase . **Ans : 1/5040**

19- In a large metropolitan area , the probabilities are 0.87 , 0.36 , 0.30 that a family (randomly chosen for a sample survey) owns a colour television set , a black and white television set or both kinds of sets. What is the probability that a family owns either anyone or both kinds of sets ?
Ans: 0.93

20-A bag contains 8 red and 5 white balls , three balls are drawn at random. Find the probability that
(i) All the three balls are white
(ii) All the three balls are red
(iii) One ball is red and two balls are white
