

SUB-MATHEMATICS
CHAPTER:-PROBABILITY
WORKSHEET (BASIC)
CLASS:-XI

1. If $P(A \cup B) = P(A) + P(B)$, then $P(A \cap B) =$
(a) 0 b) \emptyset (c) $P(A \cup B)$ (d) None of these
2. Which one of the following is correct
(a) $0 \leq P(A) \leq 1$ b) $0 < P(A) \leq 1$ (c) $0 \leq P(A) < 1$ (d) None of these
3. If A, B, C are three mutually exclusive and exhaustive events, if $P(A) = 2P(B) = 3P(C)$, then $P(A)$ is
(a) $\frac{2}{9}$ b) $\frac{3}{11}$ (c) $\frac{4}{9}$ (d) $\frac{6}{11}$
4. The probability of getting a total of 10 in a single throw of two dice is
(a) $\frac{1}{9}$ (b) $\frac{1}{12}$ (c) $\frac{1}{6}$ (d) $\frac{5}{36}$
5. Six boys and six girls sit in a row randomly. The probability that all girls are sitting together is
(a) $\frac{1}{122}$ (b) $\frac{1}{112}$ (c) $\frac{1}{102}$ (d) $\frac{1}{132}$
6. A die is rolled, then the probability that a number 1 or 6 may appear is
(a) $\frac{2}{3}$ (b) $\frac{5}{6}$ (c) $\frac{1}{3}$ (d) $\frac{1}{2}$
7. A bag contains 3 red, 4 white and 5 blue balls. All balls are different. Two balls are drawn at random. The probability that they are of different colour is
(a) $\frac{47}{66}$ (b) $\frac{10}{33}$ (c) $\frac{1}{3}$ (d) 1
8. If A and B are two events, then $P(\bar{A} \cap B) =$
(a) $P(\bar{A})P(\bar{B})$ (b) $1 - P(A) - P(B)$ (c) $P(A) + P(B) - P(A \cap B)$ (d) $P(B) - P(A \cap B)$
9. Out of 30 consecutive integers, 2 are chosen at random. The probability that their sum is odd, is
(a) $\frac{14}{29}$ (b) $\frac{16}{29}$ (c) $\frac{15}{29}$ (d) $\frac{10}{29}$
10. The probability that a leap year will have 53 Friday or 53 Saturdays is
(a) $\frac{2}{7}$ (b) $\frac{3}{7}$ (c) $\frac{4}{7}$ (d) $\frac{1}{7}$
11. If $P(A \cup B) = 0.8$ and $P(A \cap B) = 0.3$, then $P(\bar{A}) + P(\bar{B}) =$
(a) 0.3 (b) 0.5 (c) 0.7 (d) 0.9
12. A card is drawn at random from a pack of 100 cards numbered 1 to 100. The probability of drawing a number which is a square is
(a) $\frac{1}{5}$ (b) $\frac{2}{5}$ (c) $\frac{1}{10}$ (d) None of these

13. Two dice are thrown together. The probability that at least one will show its digit greater than 3 is
 (a) $\frac{1}{4}$ (b) $\frac{3}{4}$ (c) $\frac{1}{2}$ (d) $\frac{1}{8}$
14. A person write 4 letters and addresses 4 envelopes. If the letters are placed in the envelopes at random, then the probability that all letters are not placed in the right envelopes is
 (a) $\frac{1}{4}$ (b) $\frac{11}{24}$ (c) $\frac{15}{24}$ (d) $\frac{23}{24}$
15. A box contains 10 good articles and 6 with defects. One item is drawn at random. The probability that it is either good or has a defect is
 (a) $\frac{64}{64}$ (b) $\frac{49}{64}$ (c) $\frac{40}{64}$ (d) $\frac{24}{64}$
16. A and B are two events such that $P(A)=0.25$ and $P(B)=0.50$. The probability of both happening together is 0.14. The probability of both A and B not happening is
 (a) 0.39 (b) 0.25 (c) 0.11 (d) None of these
17. One card is drawn from a well-shuffled deck of 52 cards. Calculate the probability that the card drawn will not be an ace.
18. There are 4 letters and 4 addressed envelopes then the probability that all letters are not dispatched in right envelopes is
19. In a single throw of a die, find the probability of getting an even prime number
20. If $P(E \cap F) = 0.87$, find $P(E \cup F)$.
21. Given two mutually exclusive events A and B such that $P(A) = \frac{1}{2}$ and $P(B) = \frac{1}{3}$, find the value of $P(A \cup B)$.
22. What is the probability that a letter chosen at random from a word "EQUALITY" is a vowel
23. If $P(A) = \frac{3}{5}$ and $P(B) = \frac{1}{5}$, find $P(A \text{ or } B)$, if A and B are mutually exclusive.
24. One card is drawn from a well-shuffled deck of 52 cards. Calculate the probability that the card drawn will not be an ace.
25. A class consists of 15 girls and 10 boys. The class teacher wants to choose two students from amongst them as class monitors. Find the probability that one boy and one girl are chosen.
26. In class XI of a school, 40% of the students study mathematics and 30% study biology. 10% of the class study both mathematics and biology. If a student is selected at random from the class, find the probability that he will be studying mathematics or biology or both.

27. Two students Anil and Ashima appeared in an examination. The probability that Anil will qualify the examination is 0.05 and Ashima will qualify the examination is 0.10. The probability that both will qualify the examination is 0.02. Find the probability of at least one of them will not qualify the examination.
28. Find the probability that when a hand of 7 cards is drawn from a well shuffled deck of 52 cards, it contains all kings
29. The probability that at least one of the two events A and B occurs is 0.6. If A and B occur simultaneously with probability 0.3, evaluate $P(\bar{A}) + P(\bar{B})$.
30. A committee of two persons is selected from two men and women. What is the probability that the committee will have no men