



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Worksheet-28

SUBJECT – MATHEMATICS

2nd-term

Chapter: Probability

Class: XII

Topic : Probability

Date: 23.11.2020

Choose the correct option

(1 X 15= 15)

Question 1.

If the event A and B are independent, then $P(A \cap B)$ is equal to

- (a) $P(a) + P(b)$
- (b) $P(a) - P(b)$
- (c) $P(a) \cdot P(b)$
- (d) $P(a) \mid P(b)$

Question 2.

If $P(a) = \frac{4}{5}$ and $P(A \cap B) = \frac{7}{10}$, then $P(B/A)$ is equal

- (a) $\frac{1}{10}$
- (b) $\frac{1}{8}$
- (c) $\frac{7}{8}$
- (d) $\frac{17}{20}$

Question 3.

If $P(A \cap B) = \frac{7}{10}$ and $P(b) = \frac{17}{20}$, then $P(A|B)$ equals

- (a) $\frac{14}{17}$
- (b) $\frac{17}{20}$
- (c) $\frac{7}{8}$
- (d) $\frac{1}{8}$

Question 4.

If $P(a) = \frac{7}{10}$, $P(b) = \frac{7}{10}$ and $P(A \cup B) = \frac{7}{10}$ then $P(B|A) + P(A|B)$ equals

- (a) $\frac{1}{4}$
- (b) $\frac{1}{3}$
- (c) $\frac{5}{12}$
- (d) $\frac{7}{12}$

Question 5.

If $P(a) = \frac{2}{5}$, $P(b) = \frac{3}{10}$ and $P(A \cap B) = \frac{1}{5}$, then $P(A'|B')$. $P(B'|A')$ is equal to

- (a) $\frac{5}{6}$
- (b) $\frac{5}{7}$
- (c) $\frac{25}{42}$
- (d) 1

Question 6.

If $P(a) = 0.4$, $P(b) = 0.8$ and $P(B|A) = 0.6$ then $P(A \cup B)$ is equal to

- (a) 0.24
- (b) 0.3
- (c) 0.48
- (d) 0.96

Question 7.

A and B are events such that $P(a) = 0.4$, $P(b) = 0.3$ and $P(A \cup B) = 0.5$. Then $P(B \cap A)$ equals

- (a) $\frac{2}{3}$
- (b) $\frac{1}{2}$
- (c) $\frac{3}{10}$
- (d) $\frac{1}{5}$

Question 8.

You are given that A and B are two events such that $P(b) = \frac{3}{5}$, $P(A|B) = \frac{1}{2}$ and $P(A \cup B) = \frac{4}{5}$, then $P(a)$ equals

- (a) $\frac{3}{10}$
- (b) $\frac{1}{5}$
- (c) $\frac{1}{2}$
- (d) $\frac{3}{5}$

Question 9.

If $P(b) = \frac{1}{5}$, $P(A|B) = \frac{1}{2}$ and $P(A \cup B) = \frac{4}{5}$ then $P(A \cup B)' + P(A' \cup B) =$

- (a) $\frac{1}{5}$
- (b) $\frac{4}{5}$
- (c) $\frac{1}{2}$
- (d) $\frac{3}{5}$

Question 10.

If A and B are two independent events with $P(a) = \frac{3}{5}$ and $P(b) = \frac{4}{9}$, then $P(A' \cap B')$ equals

- (a) $\frac{4}{15}$
- (b) $\frac{8}{15}$
- (c) $\frac{1}{3}$
- (d) $\frac{2}{9}$

Question 11.

Let A and B two event such that $P(a) = \frac{3}{8}$, $P(b) = \frac{5}{8}$ and $P(A \cup B) = \frac{3}{4}$. Then $P(A|B) \cdot P(A'|B)$ is equal to

- (a) $\frac{2}{5}$
- (b) $\frac{3}{8}$
- (c) $\frac{3}{20}$
- (d) $\frac{6}{25}$

Question 12.

If $P(a) = \frac{3}{8}$, $P(b) = \frac{5}{8}$, $P(A \cup B) = \frac{3}{4}$ then $p(\frac{B}{A})$ is

- (a) $\frac{3}{47}$
- (b) $\frac{5}{49}$
- (c) $\frac{2}{3}$
- (d) $\frac{1}{4}$

Question 13.

Let $P(a) = \frac{7}{13}$, $P(b) = \frac{9}{13}$ and $P(A \cup B) = \frac{9}{13}$, Then $P(A'|B)$ is equal to

- (a) $\frac{6}{13}$
- (b) $\frac{4}{13}$
- (c) $\frac{4}{9}$
- (d) $\frac{5}{9}$

Question 14.

The probability that A speaks truth is $\frac{4}{5}$ while this probability for B is $\frac{3}{4}$. The probability that they contradict each others when asked to speak ana fact is

- (a) $\frac{7}{20}$
- (b) $\frac{1}{5}$
- (c) $\frac{3}{20}$
- (d) $\frac{4}{5}$

Question 15.

A pair of dice are rolled. The probability of obtaining an even prime number on each dice is

- (a) $\frac{1}{36}$
- (b) $\frac{1}{12}$
- (c) $\frac{1}{6}$
- (d) 0

Prepared by :-

Mr. Sukumar Mandal (SkM)