NDA 1 2025

LIVE

MATHS

PROBABILITY - 1

MCQS

NAVJYOTI SIR

Crack
EXAMS

. If the letters of the word "TIRUPATI" are written down at random, then what is the probability that both Ts are always consecutive ?

(a) $\frac{1}{2}$

(b) $\frac{1}{4}$

(c) $\frac{1}{7}$

(d) $\frac{1}{14}$

(TT) I R U P A I

$$\frac{\frac{7!}{2!} \times 2!}{\left(\frac{8!}{2!\,2!}\right)} = \frac{3! \times 2!}{8} = \frac{4}{8} = \frac{1}{2}$$

$n! = n \cdot (n-1)!$

$8! = 8 \times 7!$

. If the letters of the word "TIRUPATI" are written down at random, then what is the probability that both Ts are always consecutive ?

(a) $\frac{1}{2}$

(b) $\frac{1}{4}$

(c) $\frac{1}{7}$

(d) $\frac{1}{14}$

Ans: (a)

Let $m = 77^n$. The index n is given a positive integral value at random. What is the probability that the value of m will have 1 in the units place?

(a) $\frac{1}{2}$

(b) $\frac{1}{3}$

(c) $\frac{1}{4}$

(d) $\frac{1}{n}$

unit digit (77^n) = unit digit (7^n)

$7^{4k+1} = 7$

$7^{4k+2} = 9$

$7^{4k+3} = 3$

$7^{4k} = 1$

$\frac{1}{4}$

Let $m = 77^n$. The index n is given a positive integral value at random. What is the probability that the value of m will have 1 in the units place?

(a) $\frac{1}{2}$

(b) $\frac{1}{3}$

(c) $\frac{1}{4}$

(d) $\frac{1}{n}$

Ans: (c)

. Three different numbers are selected at random from the first 15 natural numbers. What is the probability that the product of two of the numbers is equal to third number ?

(a) $\frac{1}{91}$

(b) $\frac{2}{455}$

(c) $\frac{1}{65}$

(d) $\frac{6}{455}$

2 3 6 —

2 4 8 —

2 5 10 —

2 6 12 —

2 7 14 —

3 4 12 —

3 5 15 —

$$\frac{7}{{}^{15}C_3}$$

$$= \frac{7 \times 3 \times 2}{15 \times 14 \times 13} = \frac{1}{5 \times 13}$$

$$= \frac{1}{65}$$

Three different numbers are selected at random from the first 15 natural numbers. What is the probability that the product of two of the numbers is equal to third number ?

(a) $\frac{1}{91}$

(b) $\frac{2}{455}$

(c) $\frac{1}{65}$

(d) $\frac{6}{455}$

Ans: (c)

Let A and B be two events such that $P(A \cup B) \geqslant 0{\cdot}75$ and $0{\cdot}125 \leqslant P(A \cap B) \leqslant 0{\cdot}375$.

What is the minimum value of $P(A) + P(B)$?

(a) 0·625

(b) 0·750

(c) 0·825

(d) 0·875

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.75 \leq P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.75 \leq P(A) + P(B) - P(A \cap B)$$

$$P(A) + P(B) \geq 0.75 + P(A \cap B)$$

$$P(A) + P(B) \geq 0.75 + 0.125$$

$$\geq 0.875$$

Let A and B be two events such that $P(A \cup B) \geq 0{\cdot}75$ and $0{\cdot}125 \leq P(A \cap B) \leq 0{\cdot}375$.

What is the minimum value of $P(A) + P(B)$?

(a) 0·625

(b) 0·750

(c) 0·825

(d) 0·875

Ans: (d)

Let A and B be two events such that $P(A \cup B) \geq 0{\cdot}75$ and $0{\cdot}125 \leq P(A \cap B) \leq 0{\cdot}375$.

What is the maximum value of $P(A) + P(B)$?

(a) 0·75

(b) 1·125

(c) 1·375

(d) 1·625

$$0{\cdot}75 + P(A \cap B) \leq P(A) + P(B)$$

$$0{\cdot}75 + 0{\cdot}375 \leq P(A) + P(B)$$

$$1{\cdot}125$$

Let A and B be two events such that $P(A \cup B) \geq 0{\cdot}75$ and $0{\cdot}125 \leq P(A \cap B) \leq 0{\cdot}375$.

What is the maximum value of $P(A) + P(B)$?

(a) 0·75

(b) 1·125

(c) 1·375

(d) 1·625

Ans: (b)

A, B and C are three events such that $P(A) = 0{\cdot}6, P(B) = 0{\cdot}4, P(C) = 0{\cdot}5, P(A \cup B) = 0{\cdot}8, P(A \cap C) = 0{\cdot}3$ and $P(A \cap B \cap C) = 0{\cdot}2$ and $P(A \cup B \cup C) \geq 0{\cdot}85$.

What is the minimum value of $P(B \cap C)$?

(a) 0·1

(b) 0·2

(c) 0·35

(d) 0·45

$$P(A \cup B \cup C) = P(A) + P(B) + P(C) - P(A \cap B) - P(B \cap C) - P(C \cap A) + P(A \cap B \cap C)$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.8 = 0.6 + 0.4 - x$$

$$x = 0.2$$

$$P(A \cup B \cup C) = P(A) + P(B) + P(C) - P(A \cap B) - P(B \cap C) - P(C \cap A) + P(A \cap B \cap C)$$

$$0.85 \leq 0.6 + 0.4 + 0.5 - 0.2 - P(B \cap C) - 0.3 + 0.2$$

$$0.85 \leq 1.2 - P(B \cap C)$$

This is a probability $\longrightarrow$ $P(A \cup B \cup C)_{max} = 1$

$\downarrow$

gives minimum value of $P(B \cap C) = 0.2$

A, B and C are three events such that $P(A) = 0{\cdot}6, P(B) = 0{\cdot}4, P(C) = 0{\cdot}5, P(A \cup B) = 0{\cdot}8, P(A \cap C) = 0{\cdot}3$ and $P(A \cap B \cap C) = 0{\cdot}2$ and $P(A \cup B \cup C) \geq 0{\cdot}85$.

What is the minimum value of $P(B \cap C)$?

(a) 0·1

(b) 0·2

(c) 0·35

(d) 0·45

Ans: (b)

A, B and C are three events such that $P(A) = 0{\cdot}6, P(B) = 0{\cdot}4, P(C) = 0{\cdot}5, P(A \cup B) = 0{\cdot}8, P(A \cap C) = 0{\cdot}3$ and $P(A \cap B \cap C) = 0{\cdot}2$ and $P(A \cup B \cup C) \geq 0{\cdot}85$.

What is the maximum value of $P(B \cap C)$?

(a) 0·1

(b) 0·2

(c) 0·35

(d) 0·45

$$0{\cdot}85 \leq 1{\cdot}2 - P(B \cap C)$$

$$P(B \cap C) \leq 1{\cdot}2 - 0{\cdot}85$$

$$P(B \cap C) \leq 0{\cdot}35$$

A, B and C are three events such that $P(A) = 0{\cdot}6, P(B) = 0{\cdot}4, P(C) = 0{\cdot}5, P(A \cup B) = 0{\cdot}8, P(A \cap C) = 0{\cdot}3$ and $P(A \cap B \cap C) = 0{\cdot}2$ and $P(A \cup B \cup C) \geqslant 0{\cdot}85$.

What is the maximum value of $P(B \cap C)$?

(a) 0·1

(b) 0·2

(c) 0·35

(d) 0·45

Ans: (c)

An unbiased coin is tossed n times. The probability of getting at least one tail is p and the probability of at least two tails is q and $p - q = \frac{5}{32}$.

What is the value of n?

(a) 4

(b) 5

(c) 6

(d) 7

$X \longrightarrow$ number of tails

$p = 1 - (P(\text{no tails})$

$p = 1 - P(X=0) \Rightarrow P(X=0) = 1-p$

$q = 1 - (P(0 \text{ tails}) + P(1 \text{ tail}))$

$= 1 - \left((1-p) + {}^{n}C_1 \left(\frac{1}{2}\right)^1 \left(\frac{1}{2}\right)^{n-1}\right)$

$p - q = \frac{n}{2^n} = \frac{5}{32} \Rightarrow n = 5$ ✓

An unbiased coin is tossed n times. The probability of getting at least one tail is p and the probability of at least two tails is q and $p - q = \frac{5}{32}$.

What is the value of n ?

(a) 4

(b) 5

(c) 6

(d) 7

Ans: (b)

An unbiased coin is tossed n times. The probability of getting at least one tail is p and the probability of at least two tails is q and $p - q = \frac{5}{32}$.

What is the value of $p + q$?

(a) $\frac{57}{32}$

(b) $\frac{53}{32}$

(c) $\frac{51}{32}$

(d) 1

$p = 1 - P(X = 0)$

$= 1 - {}^{n}C_0 \left(\frac{1}{2}\right)^0 \left(\frac{1}{2}\right)^n$

$p = 1 - \frac{1}{2^5} = \frac{31}{32}$

$p - q = \frac{5}{32}$

$q = \frac{31 - 5}{32} = \frac{26}{32}$

$p + q = \frac{57}{32}$

An unbiased coin is tossed n times. The probability of getting at least one tail is p and the probability of at least two tails is q and $p - q = \frac{5}{32}$.

What is the value of $p + q$?

(a) $\frac{57}{32}$

(b) $\frac{53}{32}$

(c) $\frac{51}{32}$

(d) 1

Ans: (a)

Q) A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection is $\frac{1}{5}$ and that of wife's selection is $\frac{1}{3}$. What is the probability that only one of them will be selected?

(a) $\frac{1}{5}$

(b) $\frac{2}{5}$

(c) $\frac{3}{5}$

(d) $\frac{4}{5}$

$$\frac{1}{5} \times \left(1 - \frac{1}{3}\right) + \frac{1}{3} \times \left(1 - \frac{1}{5}\right)$$

$$\frac{2}{15} + \frac{4}{15} = \frac{6}{15} = \frac{2}{5}$$

Q) A husband and wife appear in an interview for two vacancies in the same post. The probability of husband's selection is $\frac{1}{5}$ and that of wife's selection is $\frac{1}{3}$. What is the probability that only one of them will be selected?

(a) $\frac{1}{5}$

(b) $\frac{2}{5}$

(c) $\frac{3}{5}$

(d) $\frac{4}{5}$

Ans: (b)

Q) If A and B are independent events such that $P(A)=\frac{1}{5}, P(A\cup B)=\frac{7}{10}$, then what is $P(\overline{B})$ equal to ?

(a) $\frac{2}{7}$ (b) $\frac{3}{7}$

(c) $\frac{3}{8}$ (d) $\frac{7}{9}$

$P(A \cap B) = P(A) \cdot P(B)$

$P(A \cup B) = P(A) + P(B) - P(A) \cdot P(B)$

$\frac{7}{10} = \frac{1}{5} + P(B)\left(1 - \frac{1}{5}\right)$

$\frac{1}{2} \times \frac{5}{4} = P(B) \Rightarrow P(B) = \frac{5}{8}$

$P(\overline{B}) = 1 - P(B) = \frac{3}{8}$ //

Q) If A and B are independent events such that $P(A)=\frac{1}{5}, P(A\cup B)=\frac{7}{10}$, then what is $P(\overline{B})$ equal to ?

(a) $\frac{2}{7}$

(b) $\frac{3}{7}$

(c) $\frac{3}{8}$

(d) $\frac{7}{9}$

Ans: (c)

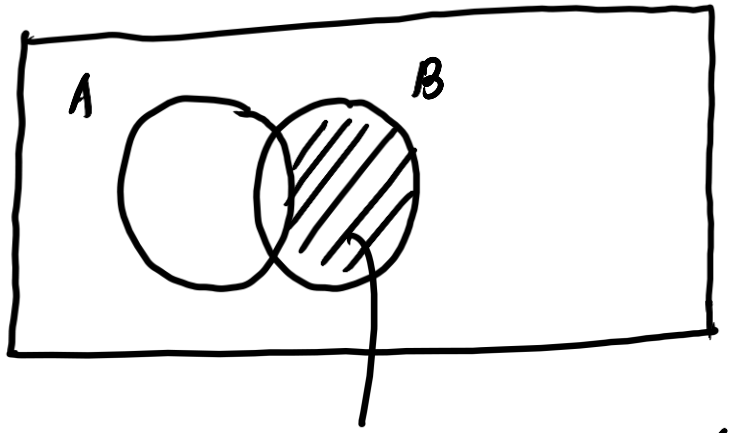
Q) For two events A and B, let $P(A)=\frac{1}{2}$, $P(A\cup B)=\frac{2}{3}$ and $P(A\cap B)=\frac{1}{6}$. What is $P(\overline{A}\cap B)$ equal to?

(a) $\frac{1}{6}$ (b) $\frac{1}{4}$ (c) $\frac{1}{3}$ (d) $\frac{1}{2}$

$$P(A\cup B) = P(A) + P(B) - P(A\cap B)$$

$$\frac{2}{3} - \frac{1}{2} + \frac{1}{6} = P(B)$$

$$\frac{4-3+1}{6} = \frac{1}{3}$$



$(B-A) = B - (A\cap B)$

$P(B) - P(A\cap B)$

$\frac{1}{3} - \frac{1}{6}$

$= \frac{3}{18} = \frac{1}{6}$

Q) For two events A and B, let $P(A)=\frac{1}{2}$, $P(A\cup B)=\frac{2}{3}$ and $P(A\cap B)=\frac{1}{6}$. What is $P(\overline{A}\cap B)$ equal to?

(a) $\frac{1}{6}$ (b) $\frac{1}{4}$ (c) $\frac{1}{3}$ (d) $\frac{1}{2}$

Ans: (a)

Q) If A, B and C are three events, then what is the probability that atleast two of these events occur together ?

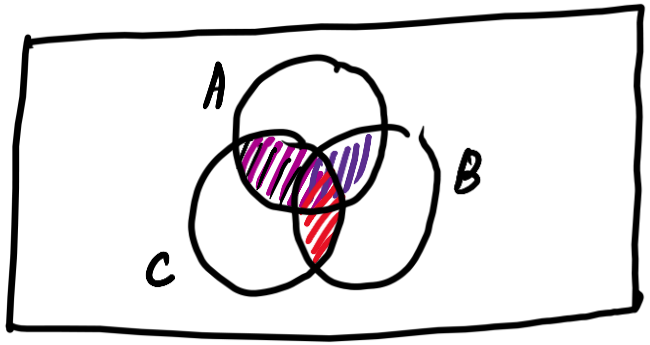
(a) $P(A \cap B) + P(B \cap C) + P(C \cap A)$ ✗

(b) $P(A \cap B) + P(B \cap C) + P(C \cap A) - P(A \cap B \cap C)$ ✗

(c) $P(A \cap B) + P(B \cap C) + P(C \cap A) - 2P(A \cap B \cap C)$ ✓

(d) $P(A \cap B) + P(B \cap C) + P(C \cap A) - 3P(A \cap B \cap C)$

atleast two → $(A \cap B)$ $(B \cap C)$ $(C \cap A)$ + $(A \cap B \cap C)$



Q) If A, B and C are three events, then what is the probability that atleast two of these events occur together ?

(a) $P(A \cap B) + P(B \cap C) + P(C \cap A)$

(b) $P(A \cap B) + P(B \cap C) + P(C \cap A) - P(A \cap B \cap C)$

(c) $P(A \cap B) + P(B \cap C) + P(C \cap A) - 2P(A \cap B \cap C)$

(d) $P(A \cap B) + P(B \cap C) + P(C \cap A) - 3P(A \cap B \cap C)$

Ans: (c)

Q) 8 coins are tossed simultaneously. The probability of getting atleast 6 heads is

(a) $\frac{7}{64}$ (b) $\frac{57}{64}$ (c) $\frac{37}{256}$ (d) $\frac{229}{256}$

6 Heads + 7 Heads + 8 Heads

$$P(X=r) = {}^{n}C_r p^r q^{n-r}$$

$$p + q = 1$$

$${}^{8}C_6 \left(\frac{1}{2}\right)^6 \left(\frac{1}{2}\right)^2 + {}^{8}C_7 \left(\frac{1}{2}\right)^7 \left(\frac{1}{2}\right)^1 + {}^{8}C_8 \left(\frac{1}{2}\right)^8 \left(\frac{1}{2}\right)^0$$

$$\frac{8 \times 7}{2} \left(\frac{1}{2}\right)^8 + 8 \left(\frac{1}{2}\right)^8 + 1 \left(\frac{1}{2}\right)^8$$

$$\left(\frac{1}{2}\right)^8 [28 + 8 + 1] = \frac{37}{256}$$

$${}^{n}C_r = {}^{n}C_{n-r}$$

$${}^{n}C_0 = {}^{n}C_n = 1 \; ; \; {}^{n}C_{n-1} = {}^{n}C_1 = n$$

Q) 8 coins are tossed simultaneously. The probability of getting atleast 6 heads is

(a) $\frac{7}{64}$ (b) $\frac{57}{64}$ (c) $\frac{37}{256}$ (d) $\frac{229}{256}$

Ans: (c)

Q) Five sticks of length 1, 3, 5, 7 and 9 feet are given. Three of these sticks are selected at random. What is the probability that the selected sticks can form a triangle?

(a) 0.5 (b) 0.4 (c) 0.3 (d) 0

Q) Five sticks of length 1, 3, 5, 7 and 9 feet are given. Three of these sticks are selected at random. What is the probability that the selected sticks can form a triangle?

(a) 0.5 (b) 0.4 (c) 0.3 (d) 0

Ans: (c)

Q) A fair coin is tossed 100 times. What is the probability of getting tails an odd number of times?

(a) $\frac{1}{2}$

(b) $\frac{3}{8}$

(c) $\frac{1}{4}$

(d) $\frac{1}{8}$

Q) A fair coin is tossed 100 times. What is the probability of getting tails an odd number of times?

(a) $\frac{1}{2}$

(b) $\frac{3}{8}$

(c) $\frac{1}{4}$

(d) $\frac{1}{8}$

Ans: (a)

Q) One bag contains 5 white balls and 3 black balls and a second bag contains 2 white balls and 4 black balls. One ball is drawn from the first bag and placed unseen in the second bag. What is the probability that a ball now drawn from the second bag is black?

(a) $\frac{15}{56}$

(b) $\frac{35}{56}$

(c) $\frac{37}{56}$

(d) $\frac{25}{48}$

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(a) $\frac{15}{56}$

(b) $\frac{35}{56}$

(c) $\frac{37}{56}$

(d) $\frac{25}{48}$

Ans: (b)

Q) Consider the following relations for two events E and F.

1. $P(E \cap F) \geq P(E) + P(F) - 1$
2. $P(E \cup F) = P(E) + P(F) + P(E \cap F)$
3. $P(E \cup F) \leq P(E) + P(F)$

Which of the above relations is/are correct?

(a) 1 only (b) 3 only
(c) 1 and 3 only (d) 1, 2 and 3

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1. $P(E \cap F) \geq P(E) + P(F) - 1$
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3. $P(E \cup F) \leq P(E) + P(F)$

Which of the above relations is/are correct?

(a) 1 only (b) 3 only
(c) 1 and 3 only (d) 1, 2 and 3

Ans: (c)

Q) If a fair die is rolled 4 times, then what is the probability that there are exactly 2 sixes?

(a) $\frac{5}{216}$

(b) $\frac{25}{216}$

(c) $\frac{125}{216}$

(d) $\frac{175}{216}$

Q) If a fair die is rolled 4 times, then what is the probability that there are exactly 2 sixes?

(a) $\frac{5}{216}$ (b) $\frac{25}{216}$

(c) $\frac{125}{216}$ (d) $\frac{175}{216}$

Ans: (b)

Q) The probability that a student passes in mathematics is 4/9 and that he passes in physics is 2/5. Assuming that passing in mathematics and physics are independent of each other, what is the probability that he passes in mathematics but fails in physics?

a) 4/15
b) 8/45
c) 26/45
d) 19/45

Q) The probability that a student passes in mathematics is 4/9 and that he passes in physics is 2/5. Assuming that passing in mathematics and physics are independent of each other, what is the probability that he passes in mathematics but fails in physics?

a) 4/15
b) 8/45
c) 26/45
d) 19/45

Ans: (a)

Q) An aircraft has three engines A, B and C. The aircraft crashes if all the three engines fail. The probabilities of failure are 0.03, 0.02 and 0.05 for engines A, B and C respectively. What is the probability that the aircraft will not crash?

(a) 0.00003
(b) 0.90
(c) 0.99997
(d) 0.90307

Q) An aircraft has three engines A, B and C. The aircraft crashes if all the three engines fail. The probabilities of failure are 0.03, 0.02 and 0.05 for engines A, B and C respectively. What is the probability that the aircraft will not crash?

(a) 0.00003
(b) 0.90
(c) 0.99997
(d) 0.90307

Ans: (c)

Q) The probability that in a random arrangement of the letters of the word 'UNIVERSITY', the two I's do not come together is

(a) 4/5
(b) 1/5
(c) 1/10
(d) 9/10

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(a) 4/5
(b) 1/5
(c) 1/10
(d) 9/10

Ans: (a)

Q) Threre are 4 white and 3 black balls in a box. In another box, there are 3 white and 4 black balls. An unbiased dice is rolled. If it shows a number less than or equal to 3, then a ball is drawn from the second box, otherwise from the first box. If the ball drawn is black then the possibility that the ball was drawn from the first box is

(a) 1/2
(b) 6/7
(c) 4/7
(d) 3/7

Q) Threre are 4 white and 3 black balls in a box. In another box, there are 3 white and 4 black balls. An unbiased dice is rolled. If it shows a number less than or equal to 3, then a ball is drawn from the second box, otherwise from the first box. If the ball drawn is black then the possibility that the ball was drawn from the first box is

(a) 1/2
(b) 6/7
(c) 4/7
(d) 3/7

Ans: (d)

Q) Two students X and Y appeared in an examination. The probability that X will qualify the examination is 0.05 and Y will qualify the examination is 0.10. The probability that both will qualify the examination is 0.02. What is the probability that only one of them will qualify the examination ?

(a) 0.15
(b) 0.14
(c) 0.12
(d) 0.11

Q) Two students X and Y appeared in an examination. The probability that X will qualify the examination is 0.05 and Y will qualify the examination is 0.10. The probability that both will qualify the examination is 0.02. What is the probability that only one of them will qualify the examination ?

(a) 0.15
(b) 0.14
(c) 0.12
(d) 0.11

Ans: (d)

Q) Two men hit at a target with probabilities $\frac{1}{2}$ and $\frac{1}{3}$ respectively. What is the probability that exactly one of them hits the target?

(a) $\frac{1}{2}$

(b) $\frac{1}{3}$

(c) $\frac{1}{6}$

(d) $\frac{2}{3}$

Q) Two men hit at a target with probabilities $\frac{1}{2}$ and $\frac{1}{3}$ respectively. What is the probability that exactly one of them hits the target?

(a) $\frac{1}{2}$

(b) $\frac{1}{3}$

(c) $\frac{1}{6}$

(d) $\frac{2}{3}$

Ans: (a)

Q) The probability that a ship safely reaches a port is $\frac{1}{3}$. The probability that out of 5 ships, at least 4 ships would arrive safely is

(a) $\frac{1}{243}$ (b) $\frac{10}{243}$ (c) $\frac{11}{243}$ (d) $\frac{13}{243}$

Q) The probability that a ship safely reaches a port is $\frac{1}{3}$. The probability that out of 5 ships, at least 4 ships would arrive safely is

(a) $\frac{1}{243}$ (b) $\frac{10}{243}$ (c) $\frac{11}{243}$ (d) $\frac{13}{243}$

Ans: (c)

Q) If $P(B)=\frac{3}{4}$, $P(A\cap B\cap \overline{C})=\frac{1}{3}$ and $P(\overline{A}\cap B\cap \overline{C})=\frac{1}{3}$, then what is $P(B\cap C)$ equal to?

(a) $\frac{1}{12}$ (b) $\frac{3}{4}$ (c) $\frac{1}{15}$ (d) $\frac{1}{9}$

Q) If $P(B)=\frac{3}{4}$, $P(A\cap B\cap \overline{C})=\frac{1}{3}$ and $P(\overline{A}\cap B\cap \overline{C})=\frac{1}{3}$, then what is $P(B\cap C)$ equal to?

(a) $\frac{1}{12}$ (b) $\frac{3}{4}$ (c) $\frac{1}{15}$ (d) $\frac{1}{9}$

Ans: (a)

Q) An unbiased coin is tossed until the first head appears or until four tosses are completed, whichever happens earlier. Which of the following statements is/are correct ?

1. The probability that no head is observed is $\frac{1}{16}$.
2. The probability that the experiment ends with three tosses is $\frac{1}{8}$.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q) An unbiased coin is tossed until the first head appears or until four tosses are completed, whichever happens earlier. Which of the following statements is/are correct ?

1. The probability that no head is observed is $\frac{1}{16}$.
2. The probability that the experiment ends with three tosses is $\frac{1}{8}$.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (c)

Q) Let two events A and B be such that $P(A) = L$ and $P(B) = M$. Which one of the following is correct?

(a) $P(A|B) < \dfrac{L + M - 1}{M}$

(b) $P(A|B) > \dfrac{L + M - 1}{M}$

(c) $P(A|B) \geq \dfrac{L + M - 1}{M}$

(d) $P(A|B) = \dfrac{L + M - 1}{M}$

Q) Let two events A and B be such that $P(A) = L$ and $P(B) = M$. Which one of the following is correct?

(a) $P(A|B) < \dfrac{L + M - 1}{M}$

(b) $P(A|B) > \dfrac{L + M - 1}{M}$

(c) $P(A|B) \geq \dfrac{L + M - 1}{M}$

(d) $P(A|B) = \dfrac{L + M - 1}{M}$

Ans: (c)

Q) If 5 of a Company's 10 delivery trucks do not meet emission standards and 3 of them are chosen for inspection, then what is the probability that none of the trucks chosen will meet emission standards?

(a) $\frac{1}{8}$ (b) $\frac{3}{8}$

(c) $\frac{1}{12}$ (d) $\frac{1}{4}$

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Ans: (c)

Q) In a series of 3 one-day cricket matches between teams A and B of a college, the probability of team A winning or drawing are 1/3 and 1/6 respectively. If a win, loss or draw gives 2, 0 and 1 point respectively, then what is the probability that team A will score 5 points in the series?

(a) $\frac{17}{18}$

(b) $\frac{11}{12}$

(c) $\frac{1}{12}$

(d) $\frac{1}{18}$

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Ans: (d)

Q) If probability of simultaneous occurrence of two events A and B is p and the probability that exactly one of A, B occurs is q, then which of the following is/are correct?

1. $P(\overline{A}) + P(\overline{B}) = 2 - 2p - q$
2. $P(\overline{A} \cap \overline{B}) = 1 - p - q$

Select the correct answer using the code given below.

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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Ans: (c)

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