Question Label: Multiple Choice Question

The value of $x$ in the inequality $\frac{5x - 2}{3} - \frac{7x - 3}{5} > \frac{x}{4}$ is:

Options:

1. $x \in (-\infty, 4)$
2. \( x \in (4, \infty) \)

3. \( x \in (0, 4) \)

4. \( x \in [-4, 4] \)

Question Number : 2  Question Id : 5431073812  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  

Question Label : Multiple Choice Question

A manufacturer has 600 litres of a 12% solution of acid. If \( x \) litres of a 30% acid solution to be added in the solution of 12% acid so that acid content in the resulting mixture will be more than 15% but less than 18%, the volume of added solution (\( x \) litre) is:

Options:
1. \( 120 < x < 300 \) liters
2. \( 200 < x < 250 \) liters
3. \( 150 < x < 200 \) liters
4. \( 250 < x < 300 \) liters

Question Number : 3  Question Id : 5431073813  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  

Question Label : Multiple Choice Question

The solution set of:

\[ |x + \frac{1}{x}| > 2, x \neq 0, \text{ is} \]

Options:
1. \( \{1, 0, 2\} \)
2. \( \mathbb{R} - \{1, 0, 2\} \)
3. \( \{-1, 0, 1\} \)
4. \( \mathbb{R} - \{-1, 0, 1\} \)

Question Number : 4  Question Id : 5431073814  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  

Question Label : Multiple Choice Question
A man wants to cut three lengths from a single piece of board of length 91 cm. The second length is to be 3 cm longer than the shortest and third length is to be twice as long as the shortest. What are the possible lengths for the shortest board if third piece is to be at least 5 cm longer than the second?

Options:
1. More than 8 cm and less than 20 cm
2. More than 8 cm but less than 21 cm.
3. More than 6 cm but less than 20 cm
4. \(8 \leq x \leq 22\), \(x\) is the length of shortest piece in cm.

Question Number : 5  Question Id : 5431073815  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
The total number of ways of answering 5 objective type questions, each question having 4 choices, is:

Options:
1. \(5^4\)
2. 1024
3. 20
4. 480

Question Number : 6  Question Id : 5431073816  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
It is required to seat 5 men and 4 women in a row so that the women occupy the even places. How many such arrangements are possible?

Options:
1. \(\frac{1}{2} (9!)\)
2. 2880
3. \(5 \times 4!\)
Question Number : 7  Question Id : 5431073817  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correc Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question

In how many ways can 9 examination papers be arranged so that the best and worst papers are never together?

Options:
1. $9! - 8!$
2. $141120$
3. $9! - (8! \times 2)$
4. $8 \times 9!$

Question Number : 8  Question Id : 5431073818  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question

A box contains 5 different red and 6 different white balls. In how many ways can 6 balls be selected so that there are at least two balls of each colour?

Options:
1. $425$
2. $420$
3. $360$
4. $11C_6$

Question Number : 9  Question Id : 5431073819  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question

How many five-letter words containing 3 vowels and two consonants can be formed using the letters of the word "EQUATION" so that the two consonants occur together?

Options:
1. \[ \binom{5}{3} \times 3 \times C_2 \]
2. 720
3. \[ \binom{5}{3} \times C_2 \times 4! \times 3! \]
4. 1440

Question Number : 10  Question Id : 5431073820  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

10th term in the binomial expansion of \( (2x^2 + \frac{1}{x})^{12} \) is :

Options :
1. \[ \frac{760}{x} \]
2. \[ \frac{1760}{x^3} \]
3. \[ \frac{1660}{x^3} \]
4. \[ \frac{760}{x^3} \]

Question Number : 11  Question Id : 5431073821  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

If the coefficient of \( x \) in \( (x^2 + \frac{\lambda}{x})^{5} \) is 270, then \( \lambda \) is equal to :

Options :
1. 3
2. 4
3. 5
4. 6
Question Number : 12  Question Id : 5431073822  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question

Constant term in the expansion of \((x - \frac{1}{x})^{10}\) is:

Options:
1. 152
2. -152
3. -252
4. 252

Question Number : 13  Question Id : 5431073823  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question

The middle term in the expansion of \(\left(\frac{2x^2}{3} + \frac{3}{2x^2}\right)^{10}\) is:

Options:
1. 251
2. 252
3. 250
4. 254

Question Number : 14  Question Id : 5431073824  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question

If the coefficients of three consecutive terms in the expansion of \((1+x)^n\) are in ratio 1:7:42, then the value of \(n\) is:

Options:
1. \(n = 50\)
Question Number : 15  Question Id : 5431073825  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
The value of: \((e^{77} + e^{70} + e^{57} + e^{44})^3\), is:

Options:
1. -8
2. 8
3. -1
4. 1

Question Number : 16  Question Id : 5431073826  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
The amplitude of \(\frac{1 + i \sqrt{3}}{\sqrt{3} + i}\) is:

Options:
\(\pi\)
1. 3
\(-\frac{\pi}{3}\)
2. \(-\frac{\pi}{3}\)
\(\pi\)
3. 6
\(-\frac{\pi}{6}\)
4. 6

Question Number : 17  Question Id : 5431073827  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label: Multiple Choice Question

If \( x + iy = (1+i)(1+2i)(1+3i) \), then value of \( x^2 + y^2 \), is :

Options:
1. 0
2. 100
3. 50
4. 25

Question Number : 18  Question Id : 5431073828  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label: Multiple Choice Question

If \( \frac{3+2i \sin \theta}{1-2i \sin \theta} \) is a real number and \( 0 < \theta < 2\pi \), then \( \theta \) is equal to :

Options:
1. \( \pi \)
2. \( \frac{\pi}{2} \)
3. \( \pi \)
4. \( \frac{\pi}{3} \)

Question Number : 19  Question Id : 5431073829  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label: Multiple Choice Question

The polar form of \( z = \frac{1+3i}{1-2i} \), is :

Options:
1. \( z = \sqrt{2} \left( \cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right) \)
2. \( z = 2 \left( \cos \frac{\pi}{3} + i \sin \frac{\pi}{3} \right) \)
3. \[ z = \sqrt{2} \left( \cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right) \]

4. \[ z = 2 \left( \cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right) \]

The least integral value of \( k \) which makes the roots of the equation \( x^2 + 5x + k = 0 \) imaginary, is:

Options:
1. 5
2. 4
3. 7
4. 6

The value of 'a' such that \( x^2 - 11x + a = 0 \) and \( x^2 - 14x + 2a = 0 \) may have a common root, is:

Options:
1. 12
2. 24
3. 16
4. 32

If 'a' and 'b' are roots of the equation \( x^2 - x + 1 = 0 \), then value of \( a^2 + b^2 \) is:

Options:
Question Number : 23  Question Id : 5431073833  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

The smallest positive integral value of 'n' for which \( \frac{(1+i)^n}{(1-i)^{n-2}} \) is a real number is:

Options :
1. \( n = 0 \)
2. \( n = 4 \)
3. \( n = 2 \)
4. \( n = 1 \)

Question Number : 24  Question Id : 5431073834  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

By reduction of Rs. 1 per kg in the price of sugar Mohan can buy one kg sugar more for Rs. 56. The original price of sugar per kg is:

Options :
1. Rs. 6 per kg
2. Rs. 7 per kg
3. Rs. 8 per kg
4. Rs. 10 per kg

Question Number : 25  Question Id : 5431073835  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
One year ago, a man was 8 times as old as his son. Now, his age is equal to the square of his son's age. The present age of the man is:

Options:
1. 50 years
2. 49 years
3. 48 years
4. 36 years

The sum of two numbers is 15. If the sum of their reciprocals is \( \frac{3}{10} \) then the smallest number is:

Options:
1. 3
2. 4
3. 5
4. 6

The speed of a boat in still water is 11 km/hr. It can go 12 km upstream and return down stream to the original point in 2 hours 45 minutes. The speed of the stream is:

Options:
1. 5 km/hr
2. 10 km/hr
3. 4 km/hr
4. 8 km/hr

Question Number : 28  Question Id : 5431073838  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
8 men and 12 boys can do a piece of work in 10 days while 6 men and 8 boys can do the same work in 14 days. The time taken by a single man to do the same work, is :
Options :
1. 120 days
2. 130 days
3. 140 days
4. 150 days

Question Number : 29  Question Id : 5431073839  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
A and B each have certain number of oranges. A says to B "If you give me 10 of your oranges, I will have twice the number of organs left with you." B replies, "If you give me 10 of your oranges, I will have the same number of oranges as left with you." The number of oranges with A, is :
Options :
1. 60 oranges
2. 70 oranges
3. 80 oranges
4. 75 oranges

Question Number : 30  Question Id : 5431073840  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If \( a_1, a_2, a_3, \ldots, a_n \) be an A. P. of non-zero terms, then

\[
\frac{a_n}{a_1 a_2} + \frac{1}{a_2 a_3} + \frac{1}{a_3 a_4} + \ldots + \frac{1}{a_{n-1} a_n} \text{ is equal to}: \\
\]

Options:
1. \( \frac{n-1}{a_1 a_n} \)
2. \( \frac{n}{a_1 a_n} \)
3. \( \frac{n+1}{a_1 a_n} \)
4. \( \frac{n(n+1)}{2 a_1 a_n} \)

Question Number: 31  Question Id: 5431073841  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1

Question Label: Multiple Choice Question
If the sum of \( n \) terms of an A. P. is \( 3n^2 + 5n \) and its \( m \)th term is 164, then value of \( m \) is:

Options:
1. \( m = 25 \)
2. \( m = 26 \)
3. \( m = 28 \)
4. \( m = 27 \)

Question Number: 32  Question Id: 5431073842  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1

Question Label: Multiple Choice Question
The first, second and last term of an A. P. are \( a, b, c \) respectively. The sum of A. P., is:

Options:
\[
\frac{(a + c)(b + c - 2a)}{2(b - a)}
\]
1.

\[
\frac{(a + c)(b + c + 2a)}{(b - a)}
\]
2.

\[
\frac{(a - c)(b - c + 2a)}{2(b - a)}
\]
3.

\[
\frac{(a - c)(b + c + a)}{(a - b)}
\]
4.

The first three of four given numbers are in G. P. and their last three are in A. P. with common difference 6. If the first and fourth numbers are equal, then the first number is:
Options:
1. 4
2. 8
3. 6
4. 2

If \( \log_x a, \ a^{x/2} \) and \( \log_b x \) are in G. P., then value of \( x \) is:
Options:
1. \( \log_a (\log_b a) \)
2. \( \log_a b \)
3. \( \log_b a \)
\[ \log a^x \]

Question Number : 35  Question Id : 5431073845  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

The last value in the sequence \( 9^{1/3}, 9^{1/9}, 9^{1/27}, \ldots \) up to infinity, is:

Options :
1. 1
2. 4
3. 2
4. 3

Question Number : 36  Question Id : 5431073846  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

If \( \frac{a^{n+1} + b^{n+1}}{a^n + b^n} \) may be the geometric mean between \( a \) and \( b \), then value of \( n \) is:

Options :
1. \( n = \frac{1}{2} \)
2. \( n = 1/4 \)
3. \( n = -\frac{1}{2} \)
4. \( n = -1/4 \)

Question Number : 37  Question Id : 5431073847  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question

If the A. M. of two positive number \( a \) and \( b \) \((a > b)\) is twice their G. M., then \( a : b \) is:

Options :
1. \( a : b = (2 - \sqrt{3}) : (4 + \sqrt{3}) \)

2. \( a : b = (2 + \sqrt{3}) : (2 - \sqrt{3}) \)

3. \( a : b = (2 + \sqrt{3}) : \sqrt{3} \)

4. \( a : b = \sqrt{2} : \sqrt{3} \)

Question Number : 38 Question Id : 5431073848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes
Correct Marks : 3 Wrong Marks : 1
Question Label : Multiple Choice Question
If \( a, b, c \) are in G.P. and \( a^{1/x} = b^{1/y} = c^{1/z} \), then \( x, y, z \) are in :
Options :
1. A.P.
2. H.P.
3. G.P.
4. Special sequence

Question Number : 39 Question Id : 5431073849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Allowed Progression : Yes Number of Replay : 999 Play On Load : No Control Enable : Yes
Correct Marks : 3 Wrong Marks : 1
Question Label : Multiple Choice Question
Sum of \( n \) terms of the series
\[
\frac{1^3}{1} + \frac{1^3 + 2^3}{1+3} + \frac{1^3 + 2^3 + 3^3}{1+3+5} + \ldots \ldots \ldots \ldots n \text{ terms,}
\]
is :
Options :
1. \( \frac{3n^2 + 9n + 13}{24} \)
2. \( \frac{n}{12} (n^2 + 9n + 17) \)
3. \( \frac{n}{24} (2n^2 + 9n + 13) \)
\[
\frac{n}{24}(n^2 + 9n + 10)
\]

**Question Number : 40  Question Id : 5431073850  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

The value of \( \log_{16} 512 \) is:

**Options :**
1. 32
2. 16
3. \( \frac{9}{2} \)
4. 9

**Question Number : 41  Question Id : 5431073851  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

If \( \log_{10} 2 = a \) and \( \log_{10} 3 = b \), then value of \( \log_{10} \left( \frac{160}{729} \right) \) is:

**Options :**
1. \( 4a + 6b + 1 \)
2. \( 4a - 6b + 1 \)
3. \( 2a + 3b + 2 \)
4. \( 2a - 3b + 2 \)

**Question Number : 42  Question Id : 5431073852  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

If \( \log_{2\sqrt{3}} x = 6 \), then the value of \( x \) is:

**Options :**
1. 3456
Question Number : 43  Question Id : 5431073853  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If \( \frac{\log_a b}{b-c} = \frac{\log_b c}{c-a} = \frac{\log_c a}{a-b} \) then value of \( a^{b+c} \times b^{c+a} \times c^{a+b} \) is equal to :

Options :
1. 0
2. 1
3. 2
4. 3

Question Number : 44  Question Id : 5431073854  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If \( y = x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \ldots \), then value of \( x \) in term of \( y \), is :

Options :
1. \( x = e^y - 1 \)
2. \( x = y + y^2 + y^3 + \ldots \)
3. \( x = 1 + e^y \)
4. \( x = y - \frac{y^2}{2} + \frac{y^3}{3} + \ldots \)

Question Number : 45  Question Id : 5431073855  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
Distance between the lines $5x + 3y - 7 = 0$ and $15x + 9y + 14 = 0$ is:

1. $\frac{35}{\sqrt{34}}$
2. $\frac{10}{3\sqrt{34}}$
3. $\frac{7}{3\sqrt{34}}$
4. $\frac{35}{3\sqrt{34}}$

---

Question Number : 46  Question Id : 5431073856  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

**Question Label : Multiple Choice Question**

Equation of the circle through origin and cuts intercepts of length $a$ and $b$ from the axes, is:

1. $x^2 + y^2 - ax - by + ab = 0$
2. $x^2 + y^2 + ax + by + a^2 + b^2 = 0$
3. $x^2 + y^2 - ax - by = 0$
4. $x^2 + y^2 + ax + by = 0$

---

Question Number : 47  Question Id : 5431073857  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

**Question Label : Multiple Choice Question**

Focus of the parabola $4y^2 + 12x - 12y + 39 = 0$, is:

1. $\left( \frac{-5}{2}, 0 \right)$
2. $\left( \frac{-13}{4}, 3 \right)$
3. \( \begin{pmatrix} -5 \\ 2 \\ 2 \end{pmatrix} \)

4. \( \begin{pmatrix} -\frac{13}{4} \\ 0 \end{pmatrix} \)

Question Number : 48  Question Id : 5431073858  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

The equation of an ellipse whose axes are along the coordinate axes, vertices are \((0, \pm 10)\) and eccentricity \(e = \frac{4}{5}\), is:

Options:

1. \( \frac{x^2}{36} + \frac{y^2}{100} = 1 \)

2. \( \frac{x^2}{100} + \frac{y^2}{36} = 1 \)

3. \( \frac{x^2}{25} + \frac{y^2}{36} = 1 \)

4. \( \frac{x^2}{25} + \frac{y^2}{100} = 1 \)

Question Number : 49  Question Id : 5431073859  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

Eccentricity of a hyperbola \( x^2 - 2y^2 - 2x + 8y - 1 = 0 \), is:

Options:

1. \( \sqrt{3} \)

2. \( 3 \)

3. \( 2\sqrt{3} \)
\[
\sqrt{\frac{2}{3}}
\]

**Question Number : 50  Question Id : 5431073860  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

Let \( A = \{1, 2, 3\} \) and \( B = \{(1,2), (2,3), (1,3)\} \) be a relation on \( A \), then the relation \( B \) is:

1. Neither symmetric nor transitive
2. Neither reflexive nor transitive
3. Reflexive
4. Transitive

**Question Number : 51  Question Id : 5431073861  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

Let \( A = \{1, 2, 3\} \). The number of equivalence relations containing \((1, 2)\) is:

1. 1
2. 2
3. 3
4. 4

**Question Number : 52  Question Id : 5431073862  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1**

**Question Label : Multiple Choice Question**

If \( f \) and \( g \) be real functions defined by \( f(x) = \frac{x}{x+1} \) and \( g(x) = \frac{1}{x+3} \), then the domain of the function \((fog)\), is:

1. \( \mathbb{R} - \{0\} \)
2. $R - \{-1\}$
3. $R - \{-3, -4\}$
4. $R - \{-1, -3\}$

Question Number : 53  Question Id : 5431073863  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If $g(x) = x^2 + x - 2$ and $\frac{1}{2}(gof)(x) = 2x^2 - 5x + 2$, then $f(x)$ is equal to :

Options :
1. $2x + 3$
2. $2x - 3$
3. $2x^2 + 3x + 1$
4. $2x^2 - 3x + 1$

Question Number : 54  Question Id : 5431073864  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If $A$ 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 happening of neither $A$ nor $B$ is :

Options :
1. 0.39
2. 0.66
3. 0.11
4. 0.25

Question Number : 55  Question Id : 5431073865  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
A bag contains 5 brown and 4 white socks. A man pulls out two socks. The probability that these are of the same colour is:

Options:
1. \(rac{1}{6}\)
2. \(rac{5}{18}\)
3. \(rac{5}{108}\)
4. \(rac{4}{9}\)

Question Number : 56  Question Id : 5431073866  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1

A bag contains 4 white and 5 black balls. Another bag contains 6 white and 7 black balls. A ball is transferred from first bag to second bag and then a ball is drawn from the second bag. What is the probability that the ball drawn is white?

Options:
1. \(rac{9}{21}\)
2. \(rac{29}{63}\)
3. \(rac{10}{63}\)
4. \(rac{25}{126}\)

Question Number : 57  Question Id : 5431073867  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1

Three positive integers are chosen at random without repetition from the first 20 positive integers. The probability that their product is even is:

Options:
1. \frac{2}{19}
2. \frac{13}{19}
3. \frac{17}{19}
4. \frac{4}{19}

Question Number : 58  Question Id : 5431073868  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

The matrix \( A = \begin{bmatrix} 0 & 5 & -7 \\ -5 & 0 & 11 \\ 7 & -11 & 0 \end{bmatrix} \) is:

Options:
1. skew-symmetric matrix
2. symmetric matrix
3. a diagonal matrix
4. an upper triangular matrix

Question Number : 59  Question Id : 5431073869  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

If \( 2 \begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix} \), then value of \( x \) and \( y \) are:

Options:
1. \( x = 2, y = 1 \)
2. \( x = 1, y = 5 \)
3. \( x = 1, y = 2 \)
4. \( x = 3, y = 3 \)
Question Number : 60  Question Id : 5431073870  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

The value of determinant \[
\begin{vmatrix}
\log_3 5 & 12 & \log_4 3 \\
\log_3 8 & \log_4 9 \\
\end{vmatrix}
\] is:

Options :
1. \(3 \log_3 2\)
2. \(17\)
3. \(2\)
4. \(15\)
5. \(2\)
6. \(8\)

Question Number : 61  Question Id : 5431073871  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

If \(a, b, c\) are in A. P., then value of \[
\begin{vmatrix}
2y+4 & 5y+7 & 8y+a \\
3y+5 & 6y+8 & 9y+b \\
4y+6 & 7y+9 & 10y+c \\
\end{vmatrix}
\], is:

Options :
1. \(10y^3\)
2. \(0\)
3. \(x+y+z+2abc\)
4. \(x^2+3y+abc\)

Question Number : 62  Question Id : 5431073872  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question

The value of \[
\begin{vmatrix}
x+y & x & x \\
5x+4y & 4x & 2x \\
10x+8y & 8x & 3x \\
\end{vmatrix}
\], is:

Options :
1. \(x\)
2. \(y\)
3. \(z\)
4. \(w\)
Question Number : 63  Question Id : 5431073873  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If \( A = \begin{bmatrix} 2 & -3 \\ 3 & 4 \end{bmatrix} \), then \( A^{-1} \) is:

Options :

1. \( \frac{1}{17} \begin{bmatrix} -4 & 2 \\ 3 & 3 \end{bmatrix} \)

2. \( \frac{1}{17} \begin{bmatrix} 4 & 3 \\ -3 & 2 \end{bmatrix} \)

3. \( \frac{1}{17} \begin{bmatrix} 2 & 3 \\ 3 & -4 \end{bmatrix} \)

4. \( \frac{1}{17} \begin{bmatrix} 1 & 3 \\ -3 & -4 \end{bmatrix} \)

Question Number : 64  Question Id : 5431073874  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
If \( x, y, z \) are different and \( \begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix} = 0 \), then \( xyz \) is equal to:

Options :

1. \( xyz = 2 \)
2. \(xyz = 1\)

3. \(xyz = -1\)

4. \(xyz = -2\)

**Question 65**

The product of the matrices \[
\begin{bmatrix}
2 & 0 & 7 \\
0 & 1 & 0 \\
1 & -2 & 1
\end{bmatrix}
\quad \text{and} \quad
\begin{bmatrix}
-x & 14x & 7x \\
0 & 1 & 0 \\
x & -4x & -2x
\end{bmatrix}
\]
is an identity matrix. Then the value of \(x\) is:

Options:

1. \(x = \frac{1}{5}\)

2. \(x = -\frac{1}{5}\)

3. \(x = \frac{3}{5}\)

4. \(x = -\frac{2}{5}\)

**Question 66**

If \(y = \log \tan \left(\frac{\pi}{4} + \frac{x}{2}\right)\), then \(\frac{dy}{dx}\) is equal to:

Options:

1. \(\frac{1}{\tan \left(\frac{\pi}{4} + \frac{x}{2}\right)}\)

2. \(\frac{1}{2 \tan \left(\frac{\pi}{4} + \frac{x}{2}\right)}\)
3. \(\sec^2\left(\frac{\pi + x}{4}\right)\)

4. \(\sec x\)

Question Number : 67  Question Id : 5431073877  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  

Question Label : Multiple Choice Question  
If \( y = \sin^{-1}\left(\frac{2x}{1+x^2}\right), x \in (-1, 1) \), then \( \frac{dy}{dx} \) is equal to :

Options :
1. \(\frac{1}{1+x^2}\)

2. \(\frac{1}{2(1+x^2)}\)

3. \(\frac{2}{1+x^2}\)

4. \(\frac{1-x^2}{(1+x^2)^2}\)

Question Number : 68  Question Id : 5431073878  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  

Question Label : Multiple Choice Question  
If \( \sin y = x \cos(a + y) \), then \( \frac{dy}{dx} \) is equal to :

Options :
1. \(\frac{\cos a}{\cos^2(a+y)}\)

2. \(\frac{\cos^2(a+y)}{\cos a}\)

3. \(\frac{\sin^2 y}{\sin a}\)

4. \(\frac{\cos a}{\sin^2 y}\)
A man 2m high, walks at a uniform speed of 6m per second away from a lamp post, 5m high. What is the rate at which the length of his shadow increases?

Options:
1. 4 m/sec.
2. 3 m/sec.
3. 5 m/sec.
4. 3.5 m/sec.

The equation of the normal to the curve $y = 2x^2 + 3\sin x$ at $x = 0$, is:

Options:
1. $x + 3y = 0$
2. $3x + y = 0$
3. $x - 3y = 0$
4. $3x - y = 0$

If $y = 3\cos (\log x) + 4\sin (\log x)$, then $(x^2y_2 + x y_1 + y)$ is equal to:

Options:
1. 1
2. 0
3. -1
4. 2
Question Number: 72  Question Id: 5431073882  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1  
Question Label: Multiple Choice Question

The real valued function

\[ f(x) = \begin{cases} 
  kx^2, & \text{if } x \leq 2 \\
  3, & \text{if } x > 2 
\end{cases} \] is continuous at \( x = 2 \). Then the value of \( k \) is:

Options:

1. \( \frac{3}{4} \)
2. \( \frac{1}{2} \)
3. \( \frac{3}{2} \)
4. \( \frac{1}{4} \)

Question Number: 73  Question Id: 5431073883  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1  
Question Label: Multiple Choice Question

The value of \( \int \frac{1 + \sin x}{1 - \sin x} \, dx \) is:

Options:

1. \( 2 \tan x + x + \sec x + c \)
2. \( 2 \tan x - x + 2 \sec x + c \)
3. \( \tan x - x + \sec^2 x + c \)
4. \( \sec x \cdot \tan x + \tan x + c \)

Question Number: 74  Question Id: 5431073884  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1  
Question Label: Multiple Choice Question

Evaluate: \( \int \sec^4 x \tan x \, dx \)

Options:
1. $\tan^2 x + \tan^4 x + c$

2. $\tan^2 x - \tan^4 x + c$

3. $\frac{1}{2} \tan^2 x + \frac{1}{4} \tan^4 x + c$

4. $\tan x + \sec^2 x \tan x + c$

Question Number: 75  Question Id: 5431073885  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1

The value of $\int_0^{\sqrt{2}} \sqrt{2-x^2} \, dx$, is:

Options:
1. $\sqrt{2}$
2. $2$
3. $0$
4. $\frac{\pi}{2}$

Question Number: 76  Question Id: 5431073886  Question Type: MCQ  Option Shuffling: Yes  Display Question Number: Yes  Single Line Question Option: No  Option Orientation: Vertical  Allowed Progression: Yes  Number of Replay: 999  Play On Load: No  Control Enable: Yes  Correct Marks: 3  Wrong Marks: 1

The value of $\int_0^{\pi} \left( \sqrt{\tan x} + \sqrt{\cot x} \right) \, dx$, is:

Options:
1. $2\pi$
2. $\sqrt{2}\pi$
3. $\pi$
4. \[ \frac{\pi}{2} \]

The value of \( \int_{\pi/5}^{3\pi/10} \frac{\sin x}{(\sin x + \cos x)} \, dx \), is:

Options:

1. \( \frac{\pi}{20} \)
2. \( \frac{\pi}{10} \)
3. \( \frac{3\pi}{20} \)
4. \( \frac{3\pi}{10} \)

The area of the region \( \{(x, y) : x^2 + y^2 \leq 1 \leq x + y\} \), is:

Options:

1. \( \frac{\pi}{4} \) sq. units
2. \( \left( \frac{\pi}{2} + \frac{1}{4} \right) \) sq. units
3. \( \left( \frac{\pi}{4} - \frac{1}{2} \right) \) sq. units
4. \( \left( \frac{\pi}{2} - \frac{1}{4} \right) \) sq. units
Solution of differential equation \( x \frac{dy}{dx} - y = \log x \), is:

Options:
1. \( y = (\log x + 1) + c \)
2. \( y = cx - (\log x + 1) \)
3. \( y = \frac{c}{x} + (1 - \log x) \)
4. \( y = \log x + c \)

The value of \((0.2) \log \sqrt{5} \left( \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \ldots + \infty \right)\) is:

Options:
1
2
3
4

If 'A $ B' means 'A is brother of B', 'A @ B' means 'A is wife of B', 'A # B' means 'A is daughter of B' and 'A & B' means 'A is father of B', then which of the following expressions indicates the relationship 'K' is father-in-law of 'H'?

Options:
1. H @ J $ L # P & K
2. H @ J $ P & L # K
3. H @ J $ L # K & P
Question Number : 82  Question Id : 5431073892  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
A is the son of B, C . B's sister has a son D and a daughter E. F is the maternal uncle of D. How many nephews does F have?  
Options :  
1. 0  
2. 1  
3. 2  
4. 3  

Question Number : 83  Question Id : 5431073893  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
Pointing to a man in a photograph, a women said, "His brother's father is the only son of my grandfather". How is the woman related to the man in the photograph?  
Options :  
1. Mother  
2. Aunt  
3. Sister  
4. Daughter  

Question Number : 84  Question Id : 5431073894  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
Arrange words given below in alphabetical order as they would appear in dictionary and find out the one that comes last:  
Options :  
1. Achieve
2. Actuate
3. Accumulate
4. Acquit

Question Number : 85  Question Id : 5431075895  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question  In the following five names which name will come in the last in a telephone directory?  Options :
1. Mahinder
2. Mahindra
3. Mahendra
4. Mahender

Question Number : 86  Question Id : 5431075896  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question  Three of the following four are alike in a certain way and hence form a group. Which is the one that does not belong to that group?  Options :
1. Shirt
2. Shoe
3. Ring
4. Cobbler

Question Number : 87  Question Id : 5431075897  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1  Question Label : Multiple Choice Question  Choose the number pair/group which is different from others?  Options :
Select from four alternative diagrams, the one that best illustrates the relationship among the three classes: Pigeons, Birds, Dogs.

Options:

1. 

2. 

3. 

4. 

Which of the following Venn-diagram correctly illustrates the relationship among the classes: Carrot, Food, Vegetables.

Options:

1. 
Out of 120 students in a school, 5% can play all the three games Cricket, Chess and Carroms. If so happens that the number of players who can play any and only two games is 30. The number of students who can play the Cricket alone is 40. What is the total number of those who can play Chess alone or Carroms alone?

Options:
1. 45
2. 44
3. 46
4. 24

One morning Uday and Vishal were talking to each other face to face at a crossing. If Vishal’s shadow was exactly to the left of Uday, which direction was Uday facing?

Options:
1. North
2. South
3. South-East
4. None of these

Question Number : 92  Question Id : 5431073902  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

Options :
1. West
2. South
3. North-East
4. South-West

Question Number : 93  Question Id : 5431073903  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
Which number replaces the (?) in the following diagram:

![Diagram](image)

Options :
1. 6
2. 9
3. 8
4. 5

Question Number : 94  Question Id : 5431073904  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
Which number replaces the (?) in the following diagram:

![Diagram](image)

Options:
1. 3
2. 4
3. 5
4. 2

It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?

Options:
1. Sunday
2. Saturday
3. Friday
4. Wednesday

Question Number : 97  Question Id : 5431073907  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
The calendar for the year 2007 will be the same for the year :
Options :
1. 2014
2. 2016
3. 2017
4. 2018

Question Number : 98  Question Id : 5431073908  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
Which of the following is not a leap year ?
Options :
1. 700
2. 800
3. 1200
4. 2000

Question Number : 99  Question Id : 5431073909  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes
Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
January 1, 2007 was Monday. What day of the week lies on January 1, 2008 ?
Options :
Monday
Tuesday
Wednesday
Sunday

**Question Number : 100  Question Id : 5431073910  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes**
Correct Marks : 3  Wrong Marks : 1
**Question Label : Multiple Choice Question**
How many times in a day, the hands of a clock are straight?
**Options :**
1. 22
2. 24
3. 44
4. 48

**Question Number : 101  Question Id : 5431073911  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes**
Correct Marks : 3  Wrong Marks : 1
**Question Label : Multiple Choice Question**
A watch which gains uniformly is 2 minutes slow at noon on Monday and is 4 min. 48 sec fast at 2 p.m. on the following Monday. When was it correct?
**Options :**
1. 2 p.m. on Tuesday
2. 2 p.m. on Wednesday
3. 3 p.m. on Thursday
4. 1 p.m. on Friday

**Question Number : 102  Question Id : 5431073912  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes**
Correct Marks : 3  Wrong Marks : 1
**Question Label : Multiple Choice Question**
Find the odd man out from following:

8, 27, 64, 100, 125, 216, 343

Options:
1. 27
2. 100
3. 125
4. 343

Find the odd man out from following:

3, 5, 7, 12, 17, 19

Options:
1. 19
2. 17
3. 5
4. 12

Preeti has a son, named Arun. Ram is Preeti's brother. Neeta too has a daughter named Reena. Neeta is Ram's sister. What is Arun's relationship with Reena?

Options:
1. Brother
2. Nephew
3. Cousin
Question Number : 105  Question Id : 5431073915  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
Given sequence : N O P Q Y B Z A R S H I J K L M T U V G F E W X D C
What will come in place of (?) in the following series :

   NDP, QWB, ZFR, ?

Options :
1. SVI
2. AFS
3. ISV
4. SFA

Question Number : 106  Question Id : 5431073916  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
In above series which letter is in the middle between the ninth letter from the right and eighth letter from the left in the given alphabets ?

Options :
1. N
2. O
3. L
4. M

Question Number : 107  Question Id : 5431073917  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
In a certain code language,
'134' means 'good and tasty';
'475' means 'see good pictures' and
'729' means 'pictures are faint'.

Which of the following digits stands for 'see'?

Options:
1. 9
2. 2
3. 1
4. 8

(A) All books are pencils.
(B) All pencils are pens.

Inferences:
(i) All books are pens.
(ii) Some pencils are not books.

Options:
1. Inference (i) is true
2. Inference (ii) is true
3. Inference (i) and (ii) are true
4. Neither of the inferences are true
Statements:
(A) Some ministers are teachers.
(B) All teachers are scholars.

Inferences:
(i) Some ministers are scholars.
(ii) All scholars are teachers.

Options:
1. Inference (i) is true
2. Inference (ii) is true
3. Inference (i) and (ii) are true
4. Neither of the inferences are true

Question Number : 110  Question Id : 5431073920  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
What number is nearest to 99547 which is divisible by 687 ?
Options:
1. 98928
2. 99479
3. 99615
4. 100166

Question Number : 111  Question Id : 5431073921  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1
Question Label : Multiple Choice Question
A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20% ?
Options:
1. 3
2. 4
Question Number : 112  Question Id : 5431073922  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  
Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
Identify missing letters to be filled up in the blank spaces provided in the following series:  
\[ \text{a__bba__cab__ac__ab__ac} \]  
Options:  
1. b, c, a, c, b  
2. b, c, b, c, c  
3. a, b, c, b, c  
4. a, c, b, c, b

Question Number : 113  Question Id : 5431073923  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  
Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
If the code of DELHI is HIPLM, then QEHVEW would be the code of:  
Options:  
1. MUMBAI  
2. MADRAS  
3. NAGPUR  
4. JAIPUR

Question Number : 114  Question Id : 5431073924  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  
Control Enable : Yes  
Correct Marks : 3  Wrong Marks : 1  
Question Label : Multiple Choice Question  
Q is the father of R, P is the son of Q, T is the brother of S, S is the daugther of R. Who are the cousins of P?  
Options:  
1. R and Q
2. R and T
3. S and T
4. S and Q

Question Number : 115  Question Id : 5431073925  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
If A is to South of B, C is to East of B, then in what direction is A with respect to C?

Options :
1. South-East
2. South-West
3. North-East
4. North-West

Question Number : 116  Question Id : 5431073926  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
₹ 395 are divided among A, B and C in such a manner that B gets 25% more than A and 20% more than C. The share of A is:

Options :
1. ₹ 198
2. ₹ 120
3. ₹ 180
4. ₹ 195

Question Number : 117  Question Id : 5431073927  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
If 5 boys write 5 pages in 5 minutes, then 3 boys will write 3 pages in:

Options :
Question Number : 118  Question Id : 5431073928  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
If A has more money than B has, but it is less than C has. D has lesser money than E has but more than A has. If C has lesser money than D has, who is richest among these five persons?

Options:
1. E
2. D
3. C
4. B

Question Number : 119  Question Id : 5431073929  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Allowed Progression : Yes  Number of Replay : 999  Play On Load : No  Control Enable : Yes  Correct Marks : 3  Wrong Marks : 1

Question Label : Multiple Choice Question
The average age of 40 students of a class is 15 years. When 10 new students are admitted, the average age is increased by 0.2 years. The average age of the new students is:

Options:
1. 15.2 years
2. 16 years
3. 16.2 years
4. 16.4 years
The average of 50 numbers is 28. If two numbers, namely 25 and 35 are discarded, then the average of the remaining numbers is nearly:

Options:
1. 27.29
2. 27.92
3. 29.27
4. 29.72