NDA 2 2024

LIVE

MATHS REVISION

CLASS 1

NAVJYOTI SIR

SSBCrack EXAMS

05 August 2024 Live Classes Schedule

8:00AM	05 AUGUST 2024 DAILY CURRENT AFFAIRS	RUBY MA'AM
9:00AM	05 AUGUST 2024 DAILY DEFENCE UPDATES	DIVYANSHU SIR

SSB INTERVIEW LIVE CLASSES

9:00AM	INTRODUCTION OF OIR & PRACTICE	ANURADHA MA'AM

AFCAT 2 2024 LIVE CLASSES

1:00PM	MAHA MARATHON SESSION	

NDA 2 2024 LIVE CLASSES

11:00AM	GK - HISTORY REVISION - CLASS 1	RUBY MA'AM
12:00PM	PHYSICS REVISION - CLASS 1	NAVJYOTI SIR
1:00PM	MATHS REVISION - CLASS 1	NAVJYOTI SIR
2:00PM	BIOLOGY REVISION - CLASS 1	SHIVANGI MA'AM
5:30PM	ENGLISH - ADAPTATION OF BORROWED WORDS - CLASS 2	ANURADHA MA'AM

CDS 2 2024 LIVE CLASSES

11:00AM	GK - HISTORY REVISION - CLASS 1	RUBY MA'AM
12:00PM	PHYSICS REVISION - CLASS 1	NAVJYOTI SIR
2:00PM	BIOLOGY REVISION - CLASS 1	SHIVANGI MA'AM
3:00PM	MATHS REVISION - CLASS 1	NAVJYOTI SIR
5:30PM	ENGLISH - ADAPTATION OF BORROWED WORDS - CLASS 2	ANURADHA MA'AM

REVISION TOPICS :

- Sets, Relations and Functions
- Trigonometric Functions

Q) What is the range of the function $f(x) = \frac{|x|}{x}, x \neq 0$?

(a) Set of all real numbers (b) Set of all integers

(c) $\{-1, 1\}$ (d) $\{-1, 0, 1\}$

Q) What is the range of the function $f(x) = \frac{|x|}{x}, x \neq 0$?

(a) Set of all real numbers (b) Set of all integers

(c) $\{-1, 1\}$ (d) $\{-1, 0, 1\}$

Ans: (c)

Q) Let $A = \{x \in W$, the set of whole numbers and $x < 3\}$, $B = \{x \in N$, the set of natural numbers and $2 \leq x < 4\}$ and $C = \{3, 4\}$, then how many elements will $(A \cup B) \times C$ contain?

(a) 6 (b) 8

(c) 10 (d) 12

$A = \{0, 1, 2\}$

$B = \{2, 3\}$

$C = \{3, 4\}$

$A \cup B = \{0, 1, 2, 3\}$

$n((A \cup B) \times C) = n(A \cup B) \times n(C)$

$= 4 \times 2 = 8$

Q) Let $A = \{x \in W$, the set of whole numbers and $x < 3\}$, $B = \{x \in N$, the set of natural numbers and $2 \leq x < 4\}$ and $C = \{3, 4\}$, then how many elements will $(A \cup B) \times C$ contain?

(a) 6
(b) 8
(c) 10
(d) 12

Ans: (b)

Q) The relation R in the set Z of integers given by $R = \{(a, b) : a - b$ is divisible by $5\}$ is

(a) reflexive
(b) reflexive but not symmetric
(c) symmetric and transitive
(d) an equivalence relation

$(a,b) \Rightarrow a - b = 5m$

Reflexive $\Rightarrow$ Let $a \in Z$ & $(a,a) \Rightarrow a - a = 0$ which is divisible by 5.

Symmetric $\Rightarrow (a,b) \in R \Rightarrow a - b = 5m$ $\quad b - a = -5m$ which is div. by 5.

Transitive $\Rightarrow (a,b), (b,c) \in R$ $\begin{cases} a - b = 5m \\ b - c = 5n \end{cases}$

$a - c = (a - b) + (b - c)$
$= 5m + 5n = 5(m + n)$

Q) The relation R in the set Z of integers given by $R = \{(a, b) : a - b$ is divisible by $5\}$ is

(a) reflexive

(b) reflexive but not symmetric

(c) symmetric and transitive

(d) an equivalence relation

Ans: (d)

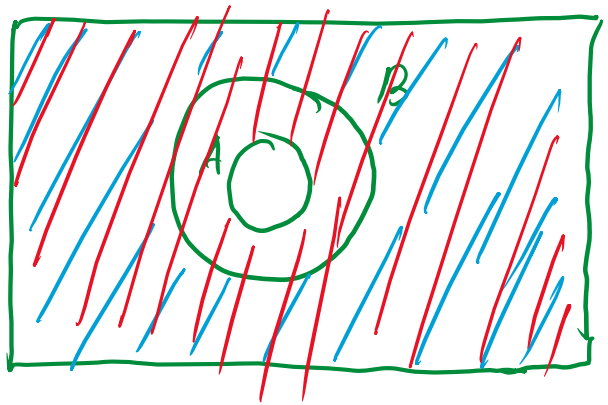
Q) If A is a subset of B, then which one of the following is correct ?

(a) $A^c \subseteq B^c$

(b) $B^c \subseteq A^c$

(c) $A^c = B^c$

(d) $A \subseteq A \cap B$



Q) If A is a subset of B, then which one of the following is correct ?

(a) $A^c \subseteq B^c$

(b) $B^c \subseteq A^c$

(c) $A^c = B^c$

(d) $A \subseteq A \cap B$

Ans: (b)

Q) What is the range of the function $y = \frac{x^2}{1+x^2}$, where $x \in \mathbf{R}$?

(a) $[0, 1)$ (b) $[0, 1]$ (c) $(0, 1)$ (d) $(0, 1]$

$1 + x^2 > x^2$

So, $\frac{x^2}{1+x^2} \leq 1$

As $x^2 > 0 \rightarrow \frac{x^2}{1+x^2} > 0$

Q) What is the range of the function $y = \frac{x^2}{1+x^2}$, where $x \in \mathbf{R}$?

(a) $[0, 1)$ (b) $[0, 1]$ (c) $(0, 1)$ (d) $(0, 1]$

Ans: (d)

Q) Let R be the set of real numbers.

Statement-1: $A = \{(x, y) \in R \times R : y - x$ is an integer$\}$ is an equivalence relation on R.

Statement-2: $B = \{(x, y) \in R \times R : x = \alpha y$ for some rational number $\alpha\}$ is an equivalence relation on R.

(a) Statement-1 is true, Statement-2 is true; Statement-2 is not a correct explanation for Statement-1.

(b) Statement-1 is true, Statement-2 is false.

(c) Statement-1 is false, Statement-2 is true.

(d) Statement-1 is true, Statement-2 is true; Statement-2 is a correct explanation for Statement-1.

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Statement-1: $A = \{(x, y) \in R \times R : y - x$ is an integer$\}$ is an equivalence relation on R.

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(a) Statement-1 is true, Statement-2 is true; Statement-2 is not a correct explanation for Statement-1.

(b) Statement-1 is true, Statement-2 is false.

(c) Statement-1 is false, Statement-2 is true.

(d) Statement-1 is true, Statement-2 is true; Statement-2 is a correct explanation for Statement-1.

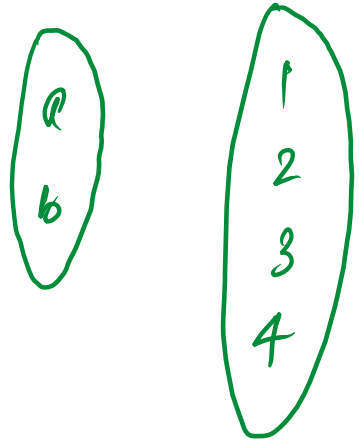
Ans: (b)

Q) Let A and B two sets containing 2 elements and 4 elements respectively. The number of subsets of A × B having 3 or more elements is

(a) 256 (b) 220 (c) 219 (d) 211

$n(A \times B) = n(A) \times n(B) = 2 \times 4 = 8$

no. of subsets $= 2^8 = \underline{256}$ ✓



$(a,1), (a,2), (a,3), (a,4)$

$(b,1), (b,2), (b,3), (b,4)$

no. of subsets,

$0 \longrightarrow \phi \longrightarrow 1$

$1 \longrightarrow 8$

$2 \longrightarrow {}^8C_2 = \frac{8 \times 7}{2} = 28$

$28 + 8 + 1 = \underline{37}$

Q) Let A and B two sets containing 2 elements and 4 elements respectively. The number of subsets of A × B having 3 or more elements is

(a) 256 (b) 220 (c) 219 (d) 211

Ans: (c)

Q) If $f(x) + 2f\left(\frac{1}{x}\right) = 3x, x \neq 0$ and

$S = \{x \in R : f(x) = f(-x)\}$; then S:

(a) contains exactly two elements.

(b) contains more than two elements.

(c) is an empty set.

(d) contains exactly one element.

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$S = \{x \in R : f(x) = f(-x)\}$; then S:

(a) contains exactly two elements.

(b) contains more than two elements.

(c) is an empty set.

(d) contains exactly one element.

Ans: (a)

Q) If A, B and C are three sets such that $A \cap B = A \cap C$ and $A \cup B = A \cup C$, then

(a) $A = C$

(b) $B = C$

(c) $A \cap B = \phi$

(d) $A = B$

Q) If A, B and C are three sets such that $A \cap B = A \cap C$ and $A \cup B = A \cup C$, then

(a) $A = C$

(b) $B = C$

(c) $A \cap B = \phi$

(d) $A = B$

Ans: (b)

Q) Let W denote the words in the English dictionary. Define the relation R by $R = \{(x, y) \in W \times W |$ the words x and y have at least one letter in common.$\}$ Then R is

(a) not reflexive, symmetric and transitive

(b) relexive, symmetric and not transitive

(c) reflexive, symmetric and transitive

(d) reflexive, not symmetric and transitive

Q) Let W denote the words in the English dictionary. Define the relation R by $R = \{(x, y) \in W \times W |$ the words x and y have at least one letter in common.$\}$ Then R is

(a) not reflexive, symmetric and transitive

(b) relexive, symmetric and not transitive

(c) reflexive, symmetric and transitive

(d) reflexive, not symmetric and transitive

Ans: (b)

Q) Let $R = \{(3, 3), (6, 6), (9, 9), (12, 12), (6, 12), (3, 9), (3, 12), (3, 6)\}$ be a relation on the set $A = \{3, 6, 9, 12\}$. The relation is

(a) reflexive and transitive only

(b) reflexive only

(c) an equivalence relation

(d) reflexive and symmetric only

Q) Let $R = \{(3, 3), (6, 6), (9, 9), (12, 12), (6, 12), (3, 9), (3, 12), (3, 6)\}$ be a relation on the set $A = \{3, 6, 9, 12\}$. The relation is

(a) reflexive and transitive only

(b) reflexive only

(c) an equivalence relation

(d) reflexive and symmetric only

Ans: (a)

Q) If X and Y are two sets, then $X \cap (X \cup Y)^c$ equals.

(a) X (b) Y

(c) ϕ (d) None of these.

Q) If X and Y are two sets, then $X \cap (X \cup Y)^c$ equals.

(a) X (b) Y

(c) ϕ (d) None of these.

Ans: (c)

Q) Let $f(x) = x^2 + 2x - 5$

and $g(x) = 5x + 30$

What are the roots of the equation $g[(f(x)] = 0$?

(a) 1, –1 (b) –1, – 1

(c) 1, 1 (d) 0, 1

Q) Let $f(x) = x^2 + 2x - 5$

and $g(x) = 5x + 30$

What are the roots of the equation $g[(f(x)] = 0$?

(a) 1, –1 (b) –1, – 1

(c) 1, 1 (d) 0, 1

Ans: (b)

Q) Suppose $f : \mathbf{R} \to \mathbf{R}$ is defined by $f(x) = \dfrac{x^2}{1 + x^2}$. What is the range of the function?

(a) [0, 1) (b) [0, 1] (c) (0, 1] (d) (0, 1)

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(a) [0, 1) (b) [0, 1] (c) (0, 1] (d) (0, 1)

Ans: (a)

Q) If a set X contains n (n > 5) elements, then what is the number of subsets of X containing less than 5 elements ?

(a) $C(n, 4)$

(b) $C(n, 5)$

(c) $\sum_{r=0}^{5} C(n, r)$

(d) $\sum_{r=0}^{4} C(n, r)$

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(a) $C(n, 4)$

(b) $C(n, 5)$

(c) $\sum_{r=0}^{5} C(n, r)$

(d) $\sum_{r=0}^{4} C(n, r)$

Ans: (d)

Q) Which one of the following is an infinite set ?

(a) The set of human beings on the earth

(b) The set of water drops in a glass of water

(c) The set of trees in a forest

(d) The set of all primes

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(a) The set of human beings on the earth
(b) The set of water drops in a glass of water
(c) The set of trees in a forest
(d) The set of all primes

Ans: (d)

Q) If $f(x) = \dfrac{\sqrt{x-1}}{x-4}$, defines a function on $\boldsymbol{R}$, then what is its domain ?

(a) $(-\infty, 4) \cup (4, \infty)$

(b) $[4, \infty)$

(c) $(1, 4) \cup (4, \infty)$

(d) $[1, 4) \cup (4, \infty)$

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(b) $[4, \infty)$

(c) $(1, 4) \cup (4, \infty)$

(d) $[1, 4) \cup (4, \infty)$

Ans: (d)

Q) For f to be a function, what is the domain of f, if $f(x) = \frac{1}{\sqrt{|x| - x}}$?

(a) $(-\infty, 0)$ (b) $(0, \infty)$ (c) $(-\infty, \infty)$ (d) $(-\infty, 0)$

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(a) $(-\infty, 0)$ (b) $(0, \infty)$ (c) $(-\infty, \infty)$ (d) $(-\infty, 0)$

Ans: (a)

Q) In an examination out of 100 students, 75 passed in English 60 passed in Mathematics and 45 passed in both English and Mathematics. What is the number of students passed in exactly one of the two subjects?

(a) 45 (b) 60

(c) 75 (d) 90

Q) In an examination out of 100 students, 75 passed in English 60 passed in Mathematics and 45 passed in both English and Mathematics. What is the number of students passed in exactly one of the two subjects?

(a) 45 (b) 60

(c) 75 (d) 90

Ans: (a)

Q) Let $R = \{x \mid x \in N, x \text{ is a multiple of } 3 \text{ and } x \leq 100\}$

$S = \{x \mid x \in N, x \text{ is a multiple of } 5 \text{ and } x \leq 100\}$

What is the number of elements in $(R \times S) \cap (S \times R)$?

(a) 36
(b) 33
(c) 20
(d) 6

Q) Let $R = \{x \mid x \in N, x \text{ is a multiple of } 3 \text{ and } x \leq 100\}$

$S = \{x \mid x \in N, x \text{ is a multiple of } 5 \text{ and } x \leq 100\}$

What is the number of elements in $(R \times S) \cap (S \times R)$?

(a) 36
(b) 33
(c) 20
(d) 6

Ans: (a)

Q) If $\sqrt{2+\sqrt{2+\sqrt{2+\sqrt{2+\ldots\infty}}}} = \operatorname{cosec}\theta$, then the value of $\sin\theta$ is equal to

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

$\sqrt{2+\operatorname{cosec}\theta} = \operatorname{cosec}\theta$

Q) If $\sqrt{2+\sqrt{2+\sqrt{2+\sqrt{2+\ldots\infty}}}} = \operatorname{cosec}\theta$, then the value of $\sin\theta$ is equal to

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

Ans: (d)

Q) Which one of the following statements is correct?

(a) The squares of the tangents of the angles 30°, 45°, 60° are in GP.

(b) The squares of the sines of the angles 30°, 45°, 60° are in GP.

(c) The squares of the secants of the angles 30°, 45°, 60° are in AP.

(d) The squares of the tangents of the angles 30°, 45°, 60° are in AP.

Q) Which one of the following statements is correct?

(a) The squares of the tangents of the angles 30°, 45°, 60° are in GP.

(b) The squares of the sines of the angles 30°, 45°, 60° are in GP.

(c) The squares of the secants of the angles 30°, 45°, 60° are in AP.

(d) The squares of the tangents of the angles 30°, 45°, 60° are in AP.

Ans: (a)

Q) Consider the following statements

I. If $\theta = 1200°$, then $(\sec\theta + \tan\theta)^{-1}$ is positive.

II. If $\theta = 1200°$, then $(\operatorname{cosec}\theta - \cot\theta)$ is negative.

Which of the statements given above is/are correct?

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Q) Consider the following statements

I. If $\theta = 1200°$, then $(\sec\theta + \tan\theta)^{-1}$ is positive.

II. If $\theta = 1200°$, then $(\operatorname{cosec}\theta - \cot\theta)$ is negative.

Which of the statements given above is/are correct?

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Ans: (d)

Q) If $\cos 3A = \frac{1}{2}$, then how many values can $\sin A$ assume? $(0 < A < 360^\circ)$

(a) 3 (b) 4 (c) 5 (d) 6

Q) If $\cos 3A = \frac{1}{2}$, then how many values can $\sin A$ assume? $(0 < A < 360°)$

(a) 3 (b) 4 (c) 5 (d) 6

Ans: (d)

Q) For what value of x does the equation $4 \sin x + 3 \sin 2x - 2 \sin 3x + \sin 4x = 2\sqrt{3}$ hold?

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

Q) For what value of x does the equation $4 \sin x + 3 \sin 2x - 2 \sin 3x + \sin 4x = 2\sqrt{3}$ hold?

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

Ans: (a)

Q) Let $\sin^{-1}x + \sin^{-1}y + \sin^{-1}z = \frac{3\pi}{2}$

for $0 \leq x, y, z \leq 1$. What is the value of $x^{1000} + y^{1001} + z^{1002}$?

(a) 0
(b) 1
(c) 3
(d) 6

Q) Let $\sin^{-1}x + \sin^{-1}y + \sin^{-1}z = \frac{3\pi}{2}$

for $0 \leq x, y, z \leq 1$. What is the value of $x^{1000} + y^{1001} + z^{1002}$?

(a) 0 (b) 1
(c) 3 (d) 6

Ans: (c)

Q) If $\alpha+\beta+\gamma=2\pi$, then

(a) $\tan\frac{\alpha}{2}+\tan\frac{\beta}{2}+\tan\frac{\gamma}{2}=\tan\frac{\alpha}{2}\tan\frac{\beta}{2}\tan\frac{\gamma}{2}$

(b) $\tan\frac{\alpha}{2}\tan\frac{\beta}{2}+\tan\frac{\beta}{2}\tan\frac{\gamma}{2}+\tan\frac{\gamma}{2}\tan\frac{\alpha}{2}=1$

(c) $\tan\frac{\alpha}{2}+\tan\frac{\beta}{2}+\tan\frac{\gamma}{2}=-\tan\frac{\alpha}{2}\tan\frac{\beta}{2}\tan\frac{\gamma}{2}$

(d) None of these.

Q) If $\alpha+\beta+\gamma=2\pi$, then

(a) $\tan\frac{\alpha}{2}+\tan\frac{\beta}{2}+\tan\frac{\gamma}{2}=\tan\frac{\alpha}{2}\tan\frac{\beta}{2}\tan\frac{\gamma}{2}$

(b) $\tan\frac{\alpha}{2}\tan\frac{\beta}{2}+\tan\frac{\beta}{2}\tan\frac{\gamma}{2}+\tan\frac{\gamma}{2}\tan\frac{\alpha}{2}=1$

(c) $\tan\frac{\alpha}{2}+\tan\frac{\beta}{2}+\tan\frac{\gamma}{2}=-\tan\frac{\alpha}{2}\tan\frac{\beta}{2}\tan\frac{\gamma}{2}$

(d) None of these.

Ans: (a)

Q) If $A = \sin^2 x + \cos^4 x$, then for all real x :

(a) $\frac{13}{16} \le A \le 1$

(b) $1 \le A \le 2$

(c) $\frac{3}{4} \le A \le \frac{13}{16}$

(d) $\frac{3}{4} \le A \le 1$

Q) If $A = \sin^2 x + \cos^4 x$, then for all real x :

(a) $\frac{13}{16} \le A \le 1$

(b) $1 \le A \le 2$

(c) $\frac{3}{4} \le A \le \frac{13}{16}$

(d) $\frac{3}{4} \le A \le 1$

Ans: (d)

Q) What is the value of $\frac{1-2\sin^2\theta\cos^2\theta}{\sin^4\theta+\cos^4\theta}+4$ equal to?

(a) 0 (b) 1 (c) 2 (d) 5

Q) What is the value of $\frac{1-2\sin^2\theta\cos^2\theta}{\sin^4\theta+\cos^4\theta}+4$ equal to?

(a) 0 (b) 1 (c) 2 (d) 5

Ans: (d)

Q) The value of the expression $\sqrt{3}\ \text{cosec}\ 20° - \sec 20°$ is equal to

(a) 2

(b) $2 \sin 20°/\sin 40°$

(c) 4

(d) $4 \sin 20°/\sin 40°$

Q) The value of the expression $\sqrt{3}\ \text{cosec}\ 20° - \sec 20°$ is equal to

(a) 2
(b) $2 \sin 20°/\sin 40°$
(c) 4
(d) $4 \sin 20°/\sin 40°$

Ans: (c)

Q) If $0 < \theta < 90°$, $\sin\theta = \frac{3}{5}$ and $x = \cot\theta$, then what is the value of $1 + 3x + 9x^2 + 27x^3 + 81x^4 + 243x^5$?

(*a*) 941 (*b*) 1000 (*c*) 1220 (*d*) 1365

Q) If $0 < \theta < 90°$, $\sin\theta = \frac{3}{5}$ and $x = \cot\theta$, then what is the value of $1 + 3x + 9x^2 + 27x^3 + 81x^4 + 243x^5$?

(*a*) 941 (*b*) 1000 (*c*) 1220 (*d*) 1365

Ans: (d)

Q) If $\alpha + \beta = \pi/2$ and $\beta + \gamma = \alpha$, then $\tan\alpha$ equals

(a) $2(\tan\beta + \tan\gamma)$ (b) $\tan\beta + \tan\gamma$

(c) $\tan\beta + 2\tan\gamma$ (d) $2\tan\beta + \tan\gamma$

Q) If $\alpha + \beta = \pi/2$ and $\beta + \gamma = \alpha$, then $\tan\alpha$ equals

(a) $2(\tan\beta + \tan\gamma)$ (b) $\tan\beta + \tan\gamma$

(c) $\tan\beta + 2\tan\gamma$ (d) $2\tan\beta + \tan\gamma$

Ans: (c)

Q) What is the simplified value of $\text{cosec}^6 A - \cot^6 A - 3\,\text{cosec}^2 A \cot^2 A$?

(a) -2 (b) -1 (c) 0 (d) 1

Q) What is the simplified value of $\text{cosec}^6 A - \cot^6 A - 3\,\text{cosec}^2 A \cot^2 A$?

(a) -2 (b) -1 (c) 0 (d) 1

Ans: (d)

Q) What is the least value of $9\sin^2\theta + 16\cos^2\theta$?

(*a*) 0 (*b*) 9 (*c*) 16 (*d*) 25

Q) What is the least value of $9\sin^2\theta + 16\cos^2\theta$?

(a) 0 (b) 9 (c) 16 (d) 25

Ans: (b)

Q) If $A + B + C = \pi$, then what is $\cos(A + B) + \cos C$ equal to ?

(a) 0
(b) $2 \cos C$
(c) $\cos C - \sin C$
(d) $2 \sin C$

Q) If $A + B + C = \pi$, then what is $\cos(A + B) + \cos C$ equal to ?

(a) 0
(b) $2 \cos C$
(c) $\cos C - \sin C$
(d) $2 \sin C$

Ans: (a)

Q) What is the minimum value of $\cos^3\theta + \sec^3\theta$ where $0° \leq 90°$?

(a) 0
(b) 1
(c) 2
(d) None of these

Q) What is the minimum value of $\cos^3\theta + \sec^3\theta$ where $0° \leq 90°$?

(a) 0
(b) 1
(c) 2
(d) None of these

Ans: (c)

Q) If α and β are positive angles such that $\alpha + \beta = \frac{\pi}{4}$, then what is $(1 + \tan\alpha)(1 + \tan\beta)$ equal to?

(a) 0 (b) 1

(c) 2 (d) 3

Q) If α and β are positive angles such that $\alpha + \beta = \frac{\pi}{4}$, then what is $(1 + \tan\alpha)(1 + \tan\beta)$ equal to?

(a) 0 (b) 1

(c) 2 (d) 3

Ans: (c)

Q) Consider the following inequalities:

1. $\sin 1° < \cos 57°$
2. $\cos 60° > \sin 57°$

Which of the above is/are correct?

(*a*) 1 only (*b*) 2 only

(*c*) Both 1 and 2 (*d*) Neither 1 nor 2

Q) Consider the following inequalities:

1. $\sin 1° < \cos 57°$
2. $\cos 60° > \sin 57°$

Which of the above is/are correct?

(*a*) 1 only (*b*) 2 only

(*c*) Both 1 and 2 (*d*) Neither 1 nor 2

Ans: (a)

Q) The value of

$$\sin\theta + \sin(\theta + 120^\circ) + \sin(\theta + 240^\circ) \text{ is equal to}$$

(a) 0 (b) 1

(c) $\sqrt{3}$ (d) 2

Q) The value of

$$\sin\theta + \sin(\theta + 120^\circ) + \sin(\theta + 240^\circ) \text{ is equal to}$$

(a) 0 (b) 1

(c) $\sqrt{3}$ (d) 2

Ans: (a)

Q) For $x \in (0, \pi)$, the equation $\sin x + 2\sin 2x - \sin 3x = 3$ has

(a) infinitely many solutions
(b) three solutions
(c) one solution
(d) no solution

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Ans: (d)

NDA 2 2024

LIVE

MATHS REVISION

CLASS 2

NAVJYOTI SIR

SSBCrack EXAMS

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REVISION TOPICS :

(06/08/24)

- Complex Numbers
- Quadratic Equations and Inequalities