1) If A is a skew symmetric matrix and n is an even positive integer, then A^n is a

a) Symmetric Matrix
b) Skew Symmetric Matrix
c) Diagonal Matrix
d) Scalar Matrix

Sol Given

$A' = -A \Rightarrow (A^n)' = (A')^n = (-A)^n$

$\Rightarrow (A^n)' = A^n$ (∵ n is even)

∴ A^n is a Symmetric matrix

Correct answer is (a)

If $A = \begin{bmatrix} 1 & 3 \\ 3 & 4 \end{bmatrix}$ and $A^2 - kA - 5I = 0$

then $k =$ ______

a) 5   b) 3

c) 7   d) 11

$$\text{Sol: } |A-\lambda I| = 0 \Rightarrow \begin{vmatrix} 1-\lambda & 3 \\ 3 & 4-\lambda \end{vmatrix} = 0$$

Required polynomial is

$$\lambda^2 - 5\lambda - 5 = 0$$

Correct answer is (a)

3) If $f(x) = \begin{vmatrix} 1 & x & x+1 \\ 2x & x(x-1) & (x+1)x \\ 3x(x-1) & x(x-1)(x-2) & (x+1)x(x-1) \end{vmatrix}$

then $f(100) =$

a) 0 b) 1 c) 100 d) -100

Sol: On operating $C_3 = C_3 - C_2$, we get

$$f(x) = \begin{vmatrix} 1 & x & 1 \\ 2x & x(x-1) & 2x \\ 3x(x-1) & x(x-1)(x-2) & 3x(x-1) \end{vmatrix} = C$$

$$f(x) = 0 \quad \forall x \quad (\because C_1 = C_3)$$

$$\Rightarrow f(100) = 0$$

Correct answer is (a)

4) Let $(G, \cdot)$ be a group

if $(a\cdot b)^2 = a^2\cdot b^2 \; \forall \, a, b \in G$

then G is ____________

a)Monoid

b) only Semigroup

c) Abelian

d) Non Abelian

$$Sol: \quad (a.b)^2 = a^2 b^2$$

$$\Rightarrow ab.ab = a.a.b.b$$

$$\Rightarrow b.ab = ab.b \Rightarrow b.a = a.b$$

$$(G, \bullet) \; is \; abelian$$

Answer is (c)

Vikasana - CET 2012

$Sol: \omega^n = 1$ and $A = 1$. Let $\left(\omega^k\right)^{-1} = x$

$\therefore x\omega^k = 1$ (by inverse law)

$$\Rightarrow x = \frac{1}{\omega^k} = \frac{\omega^n}{\omega^k} = \omega^{n-k}$$

Answer is (a)

Answer is (d)

Vikasana - CET 2012

7) If $|\vec{a}| = 1$, $|\vec{b}| = 1$ and $|\vec{a} + \vec{b}| = 1$

then $|\vec{a} - \vec{b}| =$ ________

a) $\sqrt{2}$ b) 2 c) $\sqrt{3}$ d) 1

Sol wkt.

$$\left|\vec{a}-\vec{b}\right|^2+\left|\vec{a}+\vec{b}\right|^2=2\left(\left|\vec{a}\right|^2+\left|\vec{b}\right|^2\right)$$

$$\Rightarrow\left|\vec{a}-\vec{b}\right|^2=2(2)-1=3$$

$$\Rightarrow\left|\vec{a}-\vec{b}\right|=\sqrt{3}$$

The answer is (c)

8) If the vectors 2i + 3j – 4k and ai+bj+ck are orthogonal to each other then a, b, c can have the values.

a) a = 2, b=3, c= -4

b) a=4, b=4, c=5

c) a=4, b=4, c=-5

d) a=4, b= - 4, c=2

$2a + 3b - 4c = 0$

By inspection $2(4) + 3(4) - 4(5) = 0$

$\Rightarrow$ $0 = 0$

$\therefore$ $a = 4$ $b = 4$ $c = 5$

Answer is (b)

9) Let $\vec{a} = 2\hat{i} + \hat{j} - 2\hat{k}$ and $\vec{b} = \hat{i} + \hat{j}$. If $\vec{c}$ is a vector such that $\vec{a} \cdot \vec{c} = |\vec{c}|$ and $|\vec{c} - \vec{a}| = 2\sqrt{2}$ and the angle between $\vec{a} \times \vec{b}$ and $\vec{c}$ is 30° then $\left|\left(\vec{a} \times \vec{b}\right) \times \vec{c}\right| =$ ______.

a) 2/3 b) 3/2 c) 2 d) 3

$$Sol: \left|\vec{c}-\vec{a}\right| = 2\sqrt{2} \Rightarrow \left|\vec{c}-\vec{a}\right|^2 = 8$$

$$\Rightarrow \left|\vec{c}\right|^2 + \left|\vec{a}\right|^2 - 2\left(\vec{c}.\vec{a}\right) = 8$$

$$\Rightarrow \left|\vec{c}\right|^2 + \left(4+1+4\right) - 2\left|\vec{c}\right| - 8 = 0$$

$$\Rightarrow \left|\vec{c}\right|^2 - 2\left|\vec{c}\right| + 1 = 0 \Rightarrow \left(\left|\vec{c}\right|^2 - 1\right)^2 = 0 \Rightarrow \left|\vec{c}\right| = 1$$

$$Also: \left|\vec{a}\times\vec{b}\right| = 3$$

$$\therefore \left|\left(\vec{a}\times\vec{b}\right)\times\vec{c}\right| = 3\times 1\times \sin 30^0 = \frac{3}{2}$$

Answer is (b)

10)The g.c.d. of 1080 and 675 is

a) 135 b) 145 c)125 d) 225

675) 1080 (1
675
405) 675 (1
405
270) 405 (1
270
135) 270 (2
270
0

(1080, 675) = 135

Answer is (a)

11) The remainder obtained when 64 x 65 x 66 is divided by 67 is

a) 60 b) 61 c)62 d) 63

Sol: $64 \equiv 3 \pmod 7$ ——— (1)

$65 \equiv 2 \pmod 7$ ——— (2)

$66 \equiv 1 \pmod 7$ ——— (3)

Multiplying (1), (2) and (3) we get

$64 \times 65 \times 66 \equiv 6 \pmod 7$

$\equiv 6 \pmod 7$

Answer is (b)

12) If 'a' and 'b' are +ve integers such that a^2-b^2 is a prime number then

a) $a^2-b^2 = 0$

b) $a^2-b^2 = 1$

c) $a^2-b^2 = a + b$

d) $a+b = 1$

Sol: $a^2 - b^2 = (a + b)(a - b) =$ prime number

$\Rightarrow (a + b)(a - b)$ is divisible by 1 and itself.

Since $a - b < a + b$, $\because a - b = 1$

$\therefore a^2 - b^2 = a + b$

Answer is (c)

13. The value of

$$\begin{vmatrix} \log x & \log y & \log z \\ \log 2x & \log 2y & \log 2z \\ \log 3x & \log 3y & \log 3z \end{vmatrix} =$$

Let D be given determinant

using $R_1 \to R_1 - R_2$ and $R_2 \to R_2 - R_3$

$$D = \log 2 \times \log 3 \begin{vmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ \log 3 & \log 3 & \log 3 \end{vmatrix} = 0$$

Correct answer is (a)

14) The Value of $\begin{vmatrix} a & b & c & d \\ -a & b & c & d \\ -a & -b & c & d \\ -a & -b & -c & d \end{vmatrix}$ is

a)8abcd

b) abcd

c) 4abcd

d) 6abcd

let D = Determinant, taking $abcd$ common

Applying $R_1 \to R_1 + R_4$ and $R_2 \to R_2 + R_4$

$$D = abcd\begin{vmatrix} 0 & 0 & 0 & 2 \\ -2 & 0 & 0 & 2 \\ -1 & -1 & 1 & 1 \\ -1 & -1 & -1 & 1 \end{vmatrix} = -2abcd\begin{vmatrix} -2 & 0 & 0 \\ -1 & -1 & 1 \\ -1 & -1 & -1 \end{vmatrix}$$

$$= -4abcd(-1-1) \quad D = 8abcd$$

Correct answer is (a)

15) If $a^2+b^2+c^2=0$ and

$$\begin{vmatrix} b^2+c^2 & ab & ac \\ ab & c^2+a^2 & bc \\ ac & bc & a^2+b^2 \end{vmatrix}$$

$= k\,a^2\,b^2\,c^2$ then $k=$ _____

a)1 b) 2 c) 3 d) 4

Let D = determinant

[illegible]

Taking abc as common in row and again take abc as common in column and expand, we get

[illegible]

Correct answer is (d)

[illegible]

a)1 b) 4 c) 2 d) 3

Sol 1 3 2 6 1 m

$\therefore 3^{-1} = 2$

$$\left(\frac{3^{-1} \times 4}{5}\right)^{-1} = \left(\frac{2 \times 4}{5}\right)^{-1}$$

$$= 3^{-1} = 2$$

Answer is (c)

Vikasana - CET 2012

a)2 b) 1 c) 4 d) 3

Answer is (b)

18) In any group, the number of improper subgroups is ______

a)2 b) 3 c) 4 d) 1

Every subgroup has two improper subgroups namely group it self and {e}

Answer is (a)

a)Perpendicular

b) like parallel

c) unlike parallel

d) collinear

$$Sol : |\vec{a} \times \vec{b}| = |\vec{a}|\,|\vec{b}|$$

$$|\vec{a}|\,|\vec{b}| \sin\theta = |\vec{a}|\,|\vec{b}|$$

$$\Rightarrow \sin\theta = 1$$

$$\therefore \theta = 90^0$$

Answer is (a)

20) Let a, b, c be distinct non negative real numbers. If the vectors ai+aj+ck, i + k and ci + cj + bk are coplanar then 'c' is

a) The A.M. between 'a' and 'b'.

b) The G.M. between 'a' and 'b'

c) The H.M. between 'a' and 'b'

d) Equal to zero

Sol: Given vectors are coplanar

$$\Rightarrow \begin{vmatrix} a & a & c \\ 1 & 0 & 1 \\ c & c & b \end{vmatrix} = 0$$

$$\Rightarrow c^2 = ab \Rightarrow c = \sqrt{ab}$$

Answer is (b)

2) If θ is the angle between $\vec{a}$ and $\vec{b}$

then $\dfrac{|\vec{a} \times \vec{b}|}{\vec{a} \cdot \vec{b}} =$ ____________

a) $\tan\theta$ b) $-\tan\theta$ c) $\cot\theta$ d) $-\cot\theta$

Answer is (a)

22) If $n > 1$ is even then $2^{2n}-1$ is divided by

a) 5 b) 7 c) 15 d) 11

$$Sol: 2^4 \equiv 1 (\bmod 5)$$

$$\Rightarrow 2^{2n} \equiv (1)^n (\bmod 5)$$

$$\Rightarrow 2^{2n} \equiv 1 (\bmod 5) \quad 5 \mid 2^{2n} - 1$$

Answer is (a)

23) The digit in the unit place of $183! + 3^{183}$ is

a) 7 b) 6 c)3 d) 0

Sol: Clearly, 10 is a factor of 1830

$\therefore 1830 \equiv 0 \pmod{10} \quad \text{---} (1)$

$3^2 = 9 \equiv -1 \pmod{10} \Rightarrow (3^2)^{90} \equiv 1 \pmod{10}$

$\Rightarrow 3^{180} \cdot 3^3 \equiv 3^3 \pmod{10}$

$\Rightarrow 3^{183} \equiv 7 \pmod{10} \quad \text{---} (2)$

from (1) & (2), $1833^{183} \equiv 7 \pmod{10}$

Answer is (a)

Vikasana - CET 2012

$$So\ a \mid b+c \Rightarrow b+c = ak_1 \ (k_1 \in Z) \longrightarrow (1)$$

$$a \mid b-c \Rightarrow b-c = ak_2 \ (k_2 \in Z) \longrightarrow (2)$$

Multiplying (1) and (2)

$$b^2 - c^2 = a^2 k_1 k_2 = a(a k_1 k_2),\ k \in Z$$

$$\Rightarrow a \mid b^2 - c^2 \Rightarrow b^2 \equiv c^2 \pmod{a}$$

Answer is (b)

25) If A is 3 x 3 matrix and det (3A) = k(det A) then k=___

a)9 b) 6 c) 3 d) 27

$$Sol: w.k.t. \left|KA\right| = k^n \left|A\right|$$

$$If\ A\ is\ n \times n\ matrix$$

$$\therefore \det\left(3A\right) = 3^3\left(\det A\right) = 27\left(\det A\right)$$

$$\therefore K = 27$$

Correct answer is (d)

26) If ω is an imaginary cube root of unity then

$$\begin{vmatrix} 1 & \omega & \omega^5 \\ \omega & \omega^2 & 1 \\ \omega^3 & 1 & \omega^4 \end{vmatrix} =$$

a) 0 b) 1 c) ω d) ω^2

Sol: Let D= determinant

$\omega^5 = \omega^2 \;\&\; \omega^4 = \omega$

$\text{operating } R_1 \to R_1 + R_2 + R_3$

and use

$1 + \omega + \omega^2 = 0 \quad D = 0$

Correct answer is (a)

27) The characteristic roots of the matrix

$$A = \begin{bmatrix} a & 0 & 0 \\ x & b & 0 \\ y & z & c \end{bmatrix}$$

a) x, y, z

b) a, b, c

c) ax, by, cz

d) a/x, b/y, c/y

(∴ lower triangular matrix)

Correct answer is (b)

$x = \frac{27}{20}$ Answer is (a)

[illegible]

a)1 b) 5 c) 11 d) 7

$$Sol: 7^2 = 49 \equiv 1 \pmod{12}$$

$$\Rightarrow 7^4 \equiv 1 \pmod{12}$$

$$\therefore 7^4 \times_{12} (x \times_{12} 11) = 1 \times_{12} (x \times_{12} 11)$$

$$= x \times_{12} 11 = 5 \Rightarrow x = 7$$

$$(By\ inspection\ method)$$

Answer is (d)

30) If every element of a group $(G$
is it's own inverse then it is

a)Finite

b) Infinite

c) non abelian

d) abelian

Sol: abelian

Answer is (d)

Vikasana - CET 2012

$$Sol:\ Given\left[\vec{a}\ \vec{b}\ \vec{c}\right]=0$$

$$\begin{vmatrix} 2 & -1 & 0 \\ 0 & 2 & -1 \\ -1 & 0 & 2 \end{vmatrix}\left[\vec{a}\ \vec{b}\ \vec{c}\right]=0$$

Answer is (a)

3)

a) 48 b) 36 c)24 d) 60

Answer is (c)

33) If $|\vec{a}+\vec{b}| = |\vec{a}-\vec{b}|$ then

a) $\vec{a}$ is parallel to $\vec{b}$ b) $\vec{a}$ is $\perp$ to $\vec{b}$

c) $\vec{a} = \frac{1}{2}\vec{b}$ d) Angle between $\vec{a}$ & $\vec{b}$ is $\frac{2}{3}$

$$\text{So Given } |\vec{a}+\vec{b}| = |\vec{a}-\vec{b}|$$

$$\Rightarrow |\vec{a}|^2 + |\vec{b}|^2 + 2(\vec{a}.\vec{b}) = |\vec{a}|^2 + |\vec{b}|^2 - 2(\vec{a}.\vec{b})$$

$$\Rightarrow 4(\vec{a}.\vec{b}) = 0 \Rightarrow \vec{a} \text{ is } \perp^r \text{ to } \vec{b}$$

Answer is (b)

34) The sum of all +ve divisors of 960 excluding 1 and itself is

a) 3047

b) 2180

c) 2087

d) 3048

$$Sol: 960 = 2^6 \times 3^1 \times 5^1$$

$$S_a = S(960) = \frac{2^7 - 1}{2 - 1} \times \frac{3^2 - 1}{3 - 1} \times \frac{5^2 - 1}{5 - 1}$$

$$= 127 \times 4 \times 6 = 3048$$

$$required = 3048 - (960) = 2088$$

Answer is (c)

35) The last digit in 7^{300} is

a) 1 b) 3 c)7 d) 9

Sol: $7^2 = 49$ [illegible] (mod 10)

$(7^2)^{150}$ [illegible] (mod 10) [illegible]

Answer is (a)

36) If A is square matrix such that

$$A(\operatorname{adj} A) = \begin{bmatrix} 4 & 0 & 0 \\ 0 & 4 & 0 \\ 0 & 0 & 4 \end{bmatrix} \text{ then } |\operatorname{adj} A|$$

a) 4 b) 16 c) 64 d) 256

$$\text{Soln. } |adj\,A| = |A|^{n-1} \ (\text{If } A \text{ is } n \times n \text{ matrix})$$

$$A(adj\,A) = |A|I = |A|I$$

$$\therefore |adj\,A| = (4)^{3-1} = 4^2 = 16$$

Correct answer is (b)

37) If $\overline{a}^{1}+\overline{b}^{1}+\overline{c}^{1}=0$ such that

$$\begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix} = \lambda$$

then the value of λ is ____

a)0 b) abc c)-abc d) $a^2b^2c^2$

$$\text{w.k.t.}\quad \begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix}$$

$$= abc\left(1+\frac{1}{a}+\frac{1}{b}+\frac{1}{c}\right) = \lambda \Rightarrow \lambda = ab$$

Correct answer is (b)

$$38.\ If\ A = \begin{bmatrix} 2 & 3 & 4 \\ 0 & 1 & 5 \\ 0 & 0 & 3 \end{bmatrix}\ then\ \left|A^{-1}\right| = \_\_\_\_$$

a) 6 b) 1 / 6 c) 0 d) 2

$$\left|A^{-1}\right| = \frac{1}{|A|} = \frac{1}{\begin{vmatrix} 2 & 3 & 4 \\ 0 & 1 & 5 \\ 0 & 0 & 3 \end{vmatrix}} = \frac{1}{6}$$

Correct answer is (b)

39) In a group $(G \cdot)$ $a^5 = b^4 = e$ and $ab = ba^3$ then a^2b is____

a) ab b) ba c) b^3a^2 d) ba^3

Sol: $a^2b = a(ab) = a(ba^3) = (ab)\, a^3$

$= (ba^3)a^3 = ba^6 = (ba)a^5 = (ba)e = ba$

Answer is (b)

40) The matrix $M = \begin{bmatrix} x & -x \\ -x & x \end{bmatrix}$, $x \neq 0$ forms a group under matrix multiplication with the identity element

$a)\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ $b)\begin{bmatrix} 1 & -1 \\ -1 & 1 \end{bmatrix}$

$c)\begin{bmatrix} -1 & 1 \\ 1 & -1 \end{bmatrix}$ $d)\begin{bmatrix} \frac{1}{2} & \frac{-1}{2} \\ \frac{-1}{2} & \frac{1}{2} \end{bmatrix}$

$$Sol:\ let\ E = \begin{bmatrix} a & -a \\ -a & a \end{bmatrix} = Identity\ elemen$$

$$and\ A = \begin{bmatrix} x & -x \\ -x & x \end{bmatrix} \in M \quad A.E. = A$$

$$\Rightarrow \begin{bmatrix} x & -x \\ -x & x \end{bmatrix} \begin{bmatrix} a & -a \\ -a & a \end{bmatrix} = \begin{bmatrix} x & -x \\ -x & x \end{bmatrix}$$

$$\Rightarrow 2ax = 2x \Rightarrow a = \frac{1}{2}$$

$$\therefore E = \begin{bmatrix} \frac{1}{2} & \frac{-1}{2} \\ \frac{-1}{2} & \frac{1}{2} \end{bmatrix}$$

Answer is (d)

Answer is (b)

42) The set of integers Z w.r.t. the binary operation * defined as

[illegible]

is a group. The identity element is

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

Sol: e = -1 Answer is (b)

43) If ω is an imaginary cube root of unity then $\begin{vmatrix} 1 & \omega & \omega^2 \\ \omega^2 & 1 & \omega \\ \omega & \omega^2 & 1 \end{vmatrix}$ has the value

a) 0   b) 1   c) ω d) ω^2

$$Sol : \because \left(\omega^3\right)^n = 1 \Rightarrow \omega^{3n} = 1$$

$$D = \begin{vmatrix} \omega^{3n} & \omega^n & \omega^{2n} \\ \omega^{2n} & 1 & \omega^n \\ \omega^n & \omega^{2n} & 1 \end{vmatrix}$$

$$= \omega^n \begin{vmatrix} \omega^{2n} & 1 & \omega^n \\ \omega^{2n} & 1 & \omega^n \\ \omega^n & \omega^{2n} & 1 \end{vmatrix} = 0 \quad \left(\because R_1 = R_2\right)$$

Answer is (a)

44)The vectors i - 3j - 5k, 3i - 4j - 4k and 2i –j + k represents the sides of

a)An equilateral triangle

b) Isosceles triangle

c) Right angled triangle

d)Isosceles right angled triangle

$Sol.$ Let $\vec{a} = i - 3j - 5k$, $\vec{b} = 3i - 4j - 4k$

and $\vec{c} = 2i - j + k$

$|\vec{a}| = \sqrt{1+9+25} = \sqrt{35}$. $|\vec{a}|^2 = 35$

$|\vec{b}| = \sqrt{9+16+16} = \sqrt{41}$. $|\vec{b}|^2 = 41$

$|\vec{c}| = \sqrt{4+1+1} = \sqrt{6}$. $|\vec{c}|^2 = 6$

$\therefore a^2 + c^2 = b^2$

Answer is (c)

45) The vector i + xj +3k is rotated through an angle θ and is doubled in magnitude and it becomes 4i+(4x-2)j + 2k. The value of 'x' is _____.

$$Sol: \left|2i + xj + 3k\right| = \left|4i + (4x-2)j + 2k\right|$$

$$\Rightarrow 4\left(1 + x^2 + 9\right) = 16 + (4x-2)^2 + 4$$

$$\Rightarrow 4x^2 + 40 = 20 + 16x^2 + 4 - 16x$$

$$\Rightarrow 12x^2 - 16x - 16 = 0$$

$$\Rightarrow 3x^2 - 4x - 4 = 0 \Rightarrow x = -2/3, 2$$

Answer is (a)

49) If $\vec{a}$ and $\vec{b}$ are unit vectors and θ is the angle between them then $|\vec{a} - \vec{b}| =$ ________ .

(a) $2\cos\theta$ (b) $2\sin\theta$ (c) $2\cos\frac{\theta}{2}$ (d) $2\sin\frac{\theta}{2}$

$$So\ |\vec{a}-\vec{b}|^2 = |\vec{a}|^2 + |\vec{b}|^2 - 2(\vec{a}.\vec{b})$$

$$\Rightarrow |\vec{a}-\vec{b}|^2 = 2 - 2|\vec{a}||\vec{b}|\cos\theta$$

$$\Rightarrow |\vec{a}-\vec{b}|^2 = 2(1-\cos\theta)$$

$$= 4\sin^2\frac{\theta}{2} \Rightarrow |\vec{a}-\vec{b}| = 2\sin\frac{\theta}{2}$$

Answer is (d)

4) If $\vec{a}, \vec{b}, \vec{c}$ are non coplanar vectors and $\vec{u}, \vec{v}, \vec{w}$ are three vectors defined by:

$$\vec{u} = \frac{\vec{b} \times \vec{c}}{\left[\vec{a}\,\vec{b}\,\vec{c}\right]}, \quad \vec{v} = \frac{\vec{c} \times \vec{a}}{\left[\vec{a}\,\vec{b}\,\vec{c}\right]}, \quad \vec{w} = \frac{\vec{a} \times \vec{b}}{\left[\vec{a}\,\vec{b}\,\vec{c}\right]}$$

then $\left(\vec{a}+\vec{b}\right)\cdot\vec{u} + \left(\vec{b}+\vec{c}\right)\cdot\vec{v} + \left(\vec{a}+\vec{c}\right)\cdot\vec{w} =$ ______

a) 0 b) 1 c) 2 d) 3

 Answer is (d)

[illegible]

a) 0 b) -4 c)4 d) None

Sol: Given vectors are coplanar

$$\Rightarrow \begin{vmatrix} 3 & \lambda & 5 \\ 2 & -1 & 1 \\ 1 & 2 & -3 \end{vmatrix} = 0$$

$$\Rightarrow 3(3-2) - \lambda(-6-1) + 5(4+1) = 0$$

$$\Rightarrow 3 + 7\lambda + 25 = 0 \Rightarrow \lambda = \frac{-28}{7} = -4$$

Answer is (b)

a) 4 b) 3 c)5 d) 0

Answer is (b)

50) Which of the following linear congruence has no solution?

[illegible]

Answer is (c)