

Assume A is a symmetric Matrix.

$$A = \begin{bmatrix} 0 & 1 & 2 & 3 \\ a & -1 & b & c \\ d & 0 & 3 & 4 \\ e & 2 & 4 & 1 \end{bmatrix}$$

a = Choose... ▾

b = Choose... ▾

c = Choose... ▾

d = Choose... ▾

e = Choose... ▾



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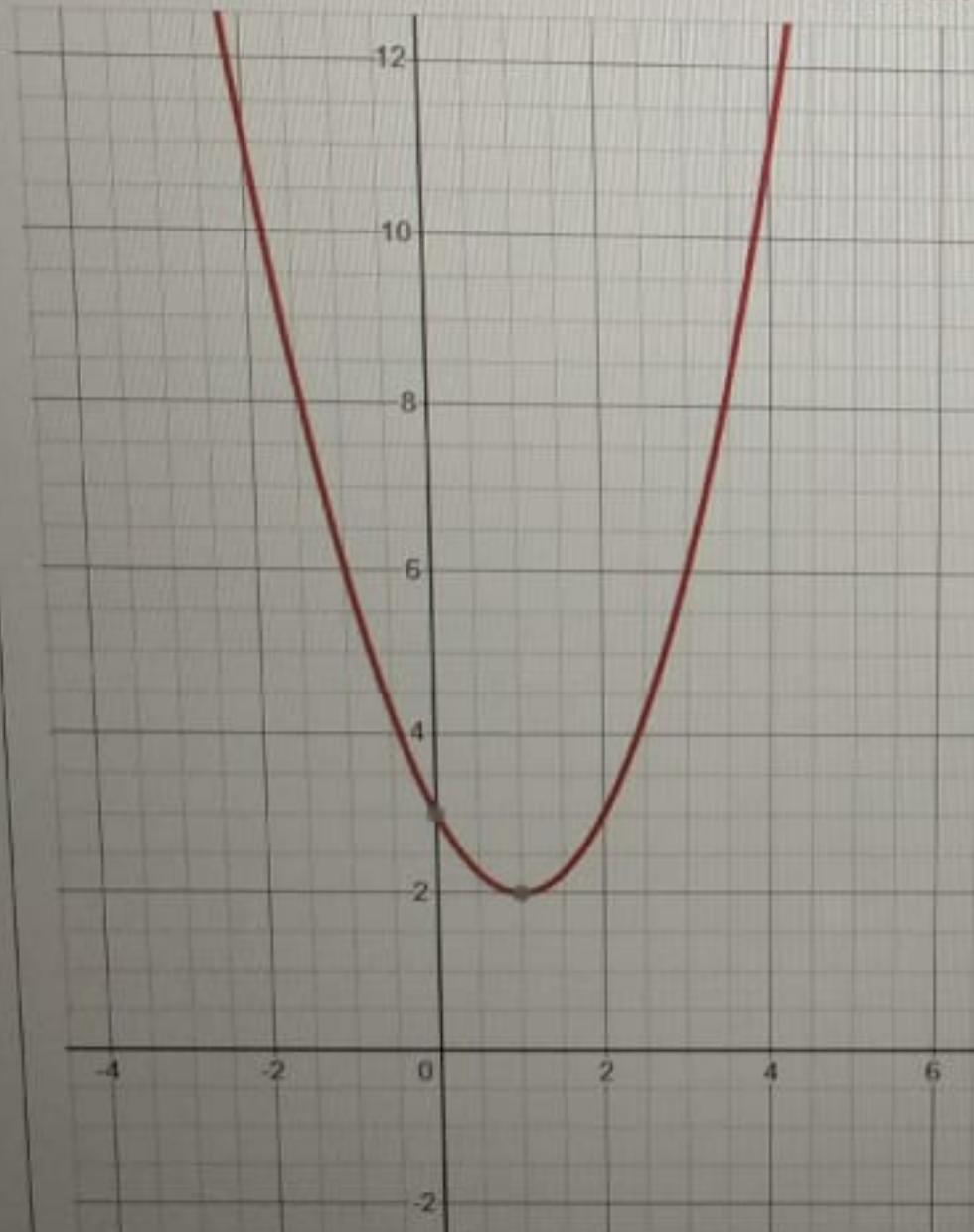
Question 4

Not yet answered

Marked out of
1.00

Flag question

Graph of $y = x^2 - 2x + 3$ is given below. Find the area under the curve from -2 to 4. (Round your answer to 2 decimal places)



Answer:

1
11
21
31
Finish attempt
Time left:

Question 14

Not yet answered

Marked out of
8.00 Flag question

$$r'_2 = r_2 + r_1$$

$$\begin{bmatrix} 1 & -1 & 1 & 3 \\ -1 & 1 & 2 & 0 \\ 1 & 2 & 3 & 1 \end{bmatrix} \rightarrow \begin{bmatrix} 1 & -1 & 1 & 3 \\ p & q & r & s \\ a & b & c & d \end{bmatrix}$$

$$r'_3 = r_3 - r_1$$

Find the values of the second matrix, after carrying out the above raw operations.

Answer for p Answer for q Answer for r Answer for s Answer for a Answer for b Answer for c

≡ Quiz na...

1	2	3
8	9	10
15	16	17
22	23	24
29	30	31

Finish attempt ...

Time left 0:58:53



Online Exams

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$$f(x) = \frac{x^2 + 7}{3x - 1}.$$

Find $f'(-1)$.

Hint : Differentiate the function and Substitute -1.

Answer:



Question 8

Not yet answered

Marked out of
3.00

Flag question

N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = x^3 - 3$$

Is f a One to one function?

Choose... ▾

Is f an onto function?

Choose... ▾

Does f has an inverse function?

Choose... ▾



Next page

Question 3

Not yet answered

Marked out of
3.00

Flag question

Consider the following system of linear equations.

$$x + y + z = 4$$

$$x + y + 4z = 1$$

$$x - y - z = 2$$

Represent the above equations in $A\mathbf{x} = \mathbf{b}$ form.

Assume that you solve this using Cramer's Rule.

Then
$$z = \frac{|A_3|}{|A|}$$

Answer for $|A_3|$ Answer for $|A|$ Answer for z



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Following adjacency matrix represents an undirected graph.

$$\begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 0 & 2 & 1 \\ 1 & 2 & 1 & 3 \\ 1 & 1 & 3 & 1 \end{bmatrix}$$

Find the following.

Number of loops	3	▼
Number of edges	11	▼
Number of vertices	4	▼
Total degree	22	▼

Question 9

Not yet answered

Marked out of
0

Flag question

$$r'_2 = r_2 + r_1$$

$$\begin{bmatrix} 1 & 1 & 0 & 2 \\ -1 & 2 & 1 & 4 \\ 2 & 1 & -1 & -2 \end{bmatrix} \rightarrow \begin{bmatrix} 1 & 1 & 0 & 2 \\ p & q & r & s \\ a & b & c & d \end{bmatrix}$$

$$r'_3 = r_3 - 2r_1$$

Find the values of the second matrix, after carrying out the above row operations.

Answer for p

Choose... ▾



Answer for q

Choose... ▾

Answer for r

Choose... ▾

Answer for s

Choose... ▾



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AI QUAD CAMERA

Answer for a

Choose... ▾

Find the following definite integral.

$$\int_{1}^{2} \left(\frac{1}{x^2} - 3 \right) dx.$$

(Keep your answer with a one decimal place)

Answer:



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Let A be a 2×2 matrix. Find $B = A^2 + 2A$

Let

$$A = \begin{bmatrix} -1 & 2 \\ 3 & -1 \end{bmatrix}$$

Let

$$B = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

Answer for a = :

Answer for b = :

Answer for c = :

Answer for d = :

Find the determinant of A.

$$A = \begin{bmatrix} 5 & 7 & 8 \\ 6 & 5 & -4 \\ 3 & 4 & 6 \end{bmatrix}$$

Answer:



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2
answered
out of
question

Consider the following system of linear equations.

$$x + y + z = 4$$

$$x + y + 4z = 1$$

$$x - y - z = 2$$

Represent the above equations in $A\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} b \\ b \\ b \end{pmatrix}$ form.

Assume that you solve this using Cramer's Rule.

Then $x = \frac{|A_1|}{|A|}$

Answer for $|A_1|$

18



Answer for $|A|$

6



Answer for x

3



Question 4

yet answered

Marked out of

Flag question

Simplify the following boolean expression.

$$\overline{A} \overline{B} \overline{C} + A \overline{B} \overline{C} + \overline{A} \overline{B} C + \overline{A} B \overline{C}$$

Select one:

$\overline{A} \overline{B} \overline{C}$

$\overline{B} \overline{C}$

$(\overline{A} + \overline{B}) \overline{C}$

$(A + \overline{B}) \overline{C}$

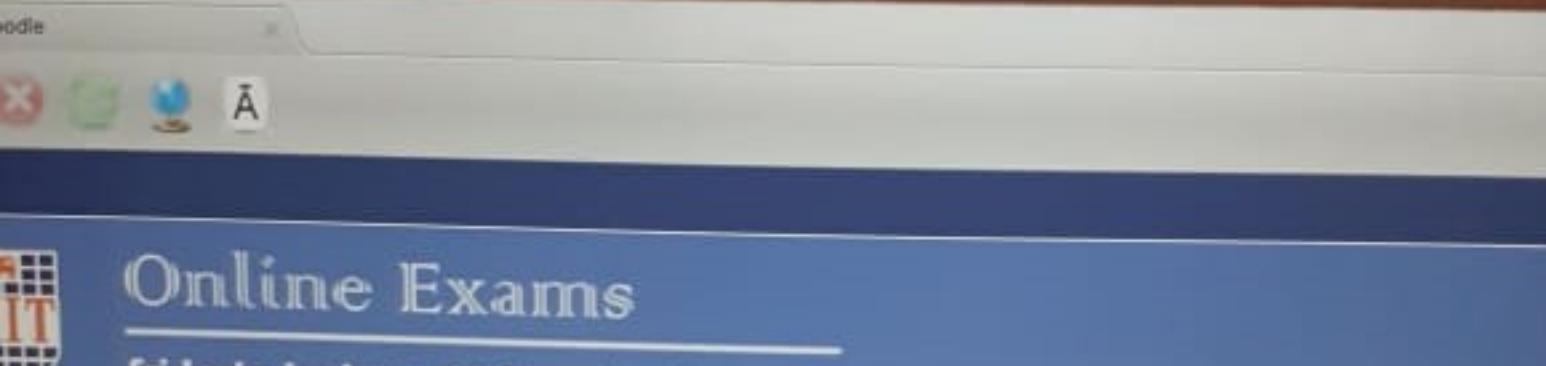
None of the above

≡ Quiz navigation

1	2	3	4
5	6	7	8
9	10	11	
12	13	14	
15	16	17	18
19	20	21	22
23	24	25	
26	27	28	
29	30	31	32

Finish attempt...

Time left 1:40:01



How many different permutations can be formed from the letters "THONDAMAN".

Answer:

I





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Consider the following system of linear equations.

$$3x + 4y = -7$$

$$2x - 3y = 18$$

Represent the above equations in $A\bar{x} = \bar{b}$ form.

Find $|A|$.

Find $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$ Choose... ▾

Answer for a Choose... ▾

Answer for b Choose... ▾

Answer for c Choose... ▾

Answer for d Choose... ▾

Answer for x Choose... ▾





2

answered

out of

question

$$f(x) = (x^2 - 5)(x^3 - 2x + 3)$$

Find $f'(-2)$.

Hint : Differentiate the function and Substitute -2.

(No spaces should be in the answer)

Answer:



Next page



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Consider the following linear system of equations.

$$x + y - z = -3$$

$$2x + y + z = -1$$

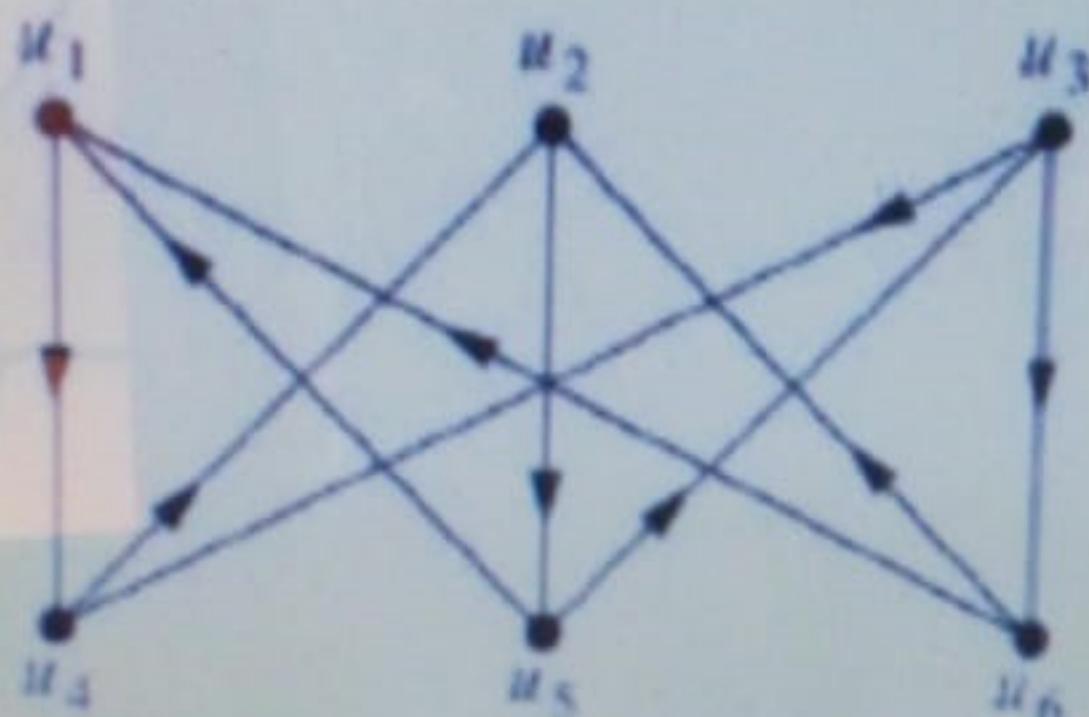
$$x + 2y + az = 1$$



Find the value of a if the above system of equations have no solution.

Answer:

Consider the following Directed Graph.



Number of Edges = : 9

Total Indegree = : 9

Total Outdegree = : 9 | I



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Consider the following linear system of equations.

$$2x + y + az = 3$$

$$x + y + z = 1$$

$$x + 2y + 2z = 0$$

Find the value of **a** if the above system of equations have infinite number of solutions.

Answer:

Next page

Finish

Time left

Let A be a 2×2 matrix. Find $B = A^2 + 2A$
Let

$$A = \begin{bmatrix} -1 & -2 \\ 3 & 1 \end{bmatrix}$$

Let

$$B = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

Answer for a = : -7

Answer for b = : -2

Answer for c = : 6

Answer for d = : 10





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Question 2

Not yet answered

Marked out of
7.00

Flag question

Consider the following system of linear equations.

$$4x + 3y = 14$$

$$3x - 2y = 19$$

Represent the above equations in $A\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} b \\ c \end{pmatrix}$ form.

Find $|A|$.

Find $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$

Choose... ▾

Answer for a

Choose... ▾

Answer for b

Choose... ▾

Answer for c

Choose... ▾

Answer for d

Choose... ▾

Answer for x

Choose... ▾

Answer for y

Choose... ▾

esc

f1 *

f2 🔈

f3 🔊

f4 ☰

f5 ☰



Question 1

Not yet answered

Marked out of

0

Flag question

Consider the following degree sequence.

6, 4, 2, 0

Is it possible to draw a graph with the above degree sequence?

Yes ▾

Does this graph have an Euler Path?

No ▾

Does this graph have an Euler circuit?

Yes ▾

How many edges are in the above graph?

6 ▾

≡ Quiz

1

2

8

9

15

16

22

23

29

30

Next page

Finish attempt

Time left 1

$$f(x) = \left(\frac{1}{x} - 3\right) \frac{x^2 + 3}{2x - 1}$$

Find $f'(-1)$.

Hint : Differentiate the function and Substitute -1.

(Write your answer as a fraction. Eg: 23/2

No spaces should be in the answer)



Question 1

Not yet answered

Marked out of
1.00

Flag question

A student has to answer 10 questions, choosing at least 4 from each of Parts A and B. If there are 6 questions in Part A and 7 in Part B, in how many ways can the student choose 10 questions?

(No spaces should be there in the answer)

Answer:

Next



Question 1

Not yet answered

Marked out of

0.00

Flag question

Consider the following function.

$$f(x) = x^4 - x^2 + 20$$

1. Find $f'(6)$:

2. Find the definite integral of $f(x)$ from -1 to 2 :



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IL20624880 Rupasinghe R.D.H. (L)

Question 1
Not yet answered
Marked out of
2.00
Flag question

Consider the following function.

$$f(x) = x^4 - x^2 + 20$$

1. Find $f'(6)$:
2. Find the definite integral of $f(x)$ from -1 to 2:

Next page

Finish attempt

Time left: 1:59:22

≡ Quiz navigation

1	2	3	4	5	6
9	10	11	12	13	14
17	18	19	20	21	22
25	26	27	28	29	30
					31

Question 1

Not yet answered

Marked out of
5.00

Flag question

$$A = \begin{bmatrix} 2 & -1 \\ 2 & 3 \end{bmatrix}$$

Find the determinant of the above matrix.:

Find the inverse of the matrix A. $A^{-1} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

a = :

b = :

c = :

d = :

(Write your answer with three decimal place)

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Consider the following function.

$$g: R \rightarrow R \quad g(x) = \frac{(9+x)}{3}$$

Find $g^{-1}(2)$

Hint : Find the inverse of g and substitute 2.

Answer:

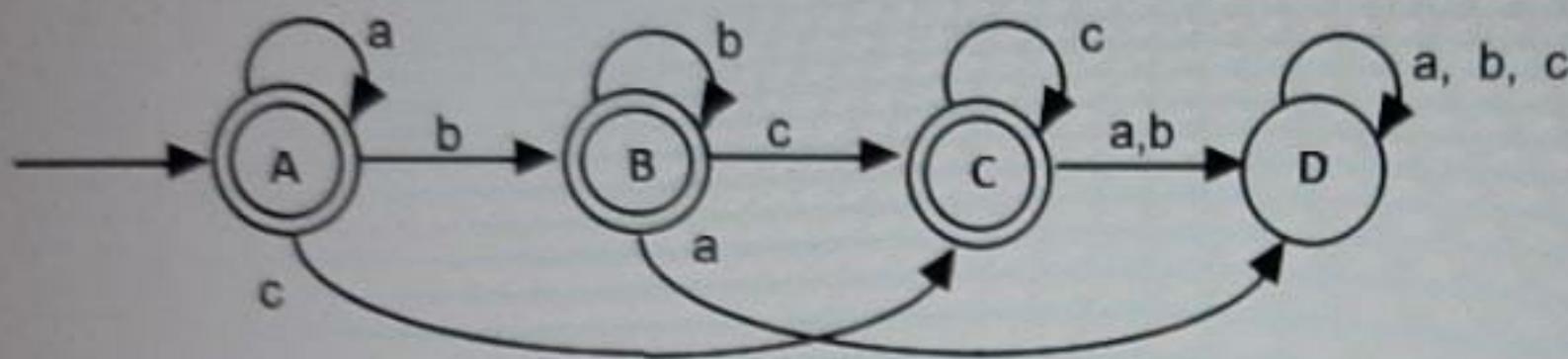


Question 1

Not yet answered

Marked out of
4.00 Flag question

Consider the following finite state Machine A.



What is the initial State?

 Choose... ▾

To what state does A go if abcacbac input to A in sequence starting from the initial state?

 Choose... ▾Find $N(C, a)$ Choose... ▾Find $N(D, b)$ Choose... ▾

≡ Quiz navigation

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32			

Finish attempt ...

Time left 1:59:30

 Next page

Question 15

Not yet answered

Marked out of
5.00

Flag question

Find the values of the resulting matrix.

$$\begin{bmatrix} 1 & 0 & 0 & 1 & 1 & 0 \\ -1 & 1 & 0 & -1 & 0 & 1 \\ -2 & 0 & 1 & 2 & 1 & 1 \end{bmatrix}$$



$$\begin{bmatrix} 1 & 0 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & a & b & c \\ 0 & 0 & 1 & d & e & f \end{bmatrix}$$

a = Choose... **b =** Choose... **c =** Choose... **d =** Choose... **e =** Choose... **f =** Choose...

≡ Quiz navigation

1	2	3	4
5	6	7	8
9	10	11	
12	13	14	15
16	17	18	
22	23	24	25
29	30	31	32

Final attempt

Time left 0:01:16



Question 14

Not yet answered

Marked out of
5.00

Flag question

Assume A is a symmetric Matrix.

$$A = \begin{bmatrix} -1 & 0 & 2 & 1 \\ a & 4 & 3 & d \\ b & e & 0 & 3 \\ c & -2 & 3 & 2 \end{bmatrix}$$

a = Choose... ▾**b** = Choose... ▾**c** = Choose... ▾**d** = Choose... ▾**e** = Choose... ▾

Next page

≡ Quiz navig.

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33

Final attempt

Time left 0:02:58

x



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In an examination there are three multiple choice questions and each question has 4 choices with one correct answer. Number of ways in which a student can fail to get all answers correct is

(No spaces should be there in the answer)

Answer:

Find how many **Govisetha Tickets** can be Printed in a one Draw if it includes one capital letter and 4 numbers. (Any number from 00 - 99)

Assume that the numbers cannot be repeated.



Answer:





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Question 32

Not yet answered

Marked out of
0.00

Flag question

Following adjacency matrix represents an undirected graph.

$$\begin{bmatrix} 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 2 \\ 1 & 1 & 0 & 3 \\ 1 & 2 & 3 & 1 \end{bmatrix}$$



Find the following.

Number of loops

Number of edges

Number of vertices

Total degree

Question 13

Not yet answered

Marked out of
9.00

Flag question

If $|A| = 128$ then find the cofactor matrix of A.

$$A = \begin{bmatrix} x & 5 & 7 \\ 2 & 4 & 1 \\ -2 & 8 & 3 \end{bmatrix}$$

C_{11} Choose... ▾

C_{12} Choose... ▾

C_{13} Choose... ▾

C_{21} Choose... ▾

C_{22} Choose... ▾

Find the values of the resulting matrix.

$$\begin{bmatrix} 1 & 1 & 0 & 1 & 0 & 1 \\ 0 & 1 & 0 & -1 & 1 & 0 \\ 0 & 0 & 2 & 4 & 2 & 8 \end{bmatrix}$$



$$\begin{bmatrix} 1 & 0 & 0 & a & b & c \\ 0 & 1 & 0 & -1 & 1 & 0 \\ 0 & 0 & 1 & d & e & f \end{bmatrix}$$

a = Choose...,

b = Choose...,

c = Choose...,

d = Choose...,

e = Choose...,

f = Choose...,



21

answered
out of
question

If $|A| = 128$ then find the cofactor matrix of A.

$$A = \begin{bmatrix} x & 5 & 7 \\ 2 & 4 & 1 \\ -2 & 8 & 3 \end{bmatrix}$$

C_{11} Choose... ▾

C_{12} Choose... ▾

C_{13} Choose... ▾

C_{21} Choose... ▾

C_{22} Choose... ▾

C_{23} Choose... ▾



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Following adjacency matrix represents an undirected graph.

$$\begin{bmatrix} 0 & 1 & 1 & 1 \\ 1 & 1 & 1 & 2 \\ 1 & 1 & 0 & 3 \\ 1 & 2 & 3 & 1 \end{bmatrix}$$

Find the following.

Number of loops 2 ▾

Number of edges 10 ▾

Number of vertices 4 ▾

Total degree Choose... ▾

Question 20

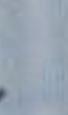
Not yet answered

Marked out of
6.00

Flag question

Find the values of the resulting matrix.

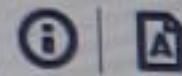
$$\begin{bmatrix} 1 & 0 & 0 & 1 & 1 & -1 \\ -1 & 1 & -1 & 2 & 1 & 0 \\ 0 & 0 & 1 & 3 & 2 & -1 \end{bmatrix}$$



$$\begin{bmatrix} 1 & 0 & 0 & 1 & 1 & -1 \\ 0 & 1 & 0 & a & b & c \\ 0 & 0 & 1 & d & e & f \end{bmatrix}$$

 $a =$ Choose... $b =$ Choose... $c =$ Choose... $d =$ Choose... $e =$ Choose... $f =$ Choose...

X



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Consider the following degree sequence.

7, 6, 5, 4, 4, 2, 2

Is it possible to draw a graph with the above degree sequence?

No

Does this graph have an Euler Path?

Choose...

Does this graph have an Euler circuit?

Choose...

How many edges are in the above graph?

Choose...



19

Simplest form of the following Boolean expression is

$$ABC + \bar{A}BC + A\bar{B}C + A\bar{B}\bar{C}$$

$$AB + \bar{B}\bar{C}$$

$$AC + \bar{B}C$$

$$AC + B\bar{C}$$

$$A\bar{C} + B\bar{C}$$

- None of the above

Consider the following system of linear equations.

$$x + y - z = -1$$

$$2x + y + 2z = 0$$

$$x - y - 2z = -6$$

Represent the above equations in $A\mathbf{x} = \mathbf{b}$ form.

Assume that you solve this using Cramer's Rule.

Then $x = \frac{|A_1|}{|A|}$

Answer for $|A_1|$

Choose...

Answer for $|A|$

Choose...

How many different license plates can be made if each plate contains a sequence of three uppercase English letters followed by three digits (and no sequences of letters are prohibited, even if they are obscene)?

Answer:

I

Let $A = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 0 \\ 6 & -2 \end{bmatrix}$

Find $A^2 - 3B + 3A^T$

Let $A^2 - 3B + 3A^T = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$

Answer for a_{11}



Answer for a_{12}



Answer for a_{21}



Answer for a_{22}





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If $|A| = 128$ then find the cofactor matrix of A.

$$A = \begin{vmatrix} x & 5 & 7 \\ 2 & 4 & 1 \\ -2 & 8 & 3 \end{vmatrix}$$

C_{11} Choose... *

C_{12} Choose... *

C_{13} Choose... *

C_{21} Choose... *

C_{22} Choose... *

Let $A = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 0 \\ 6 & -2 \end{bmatrix}$

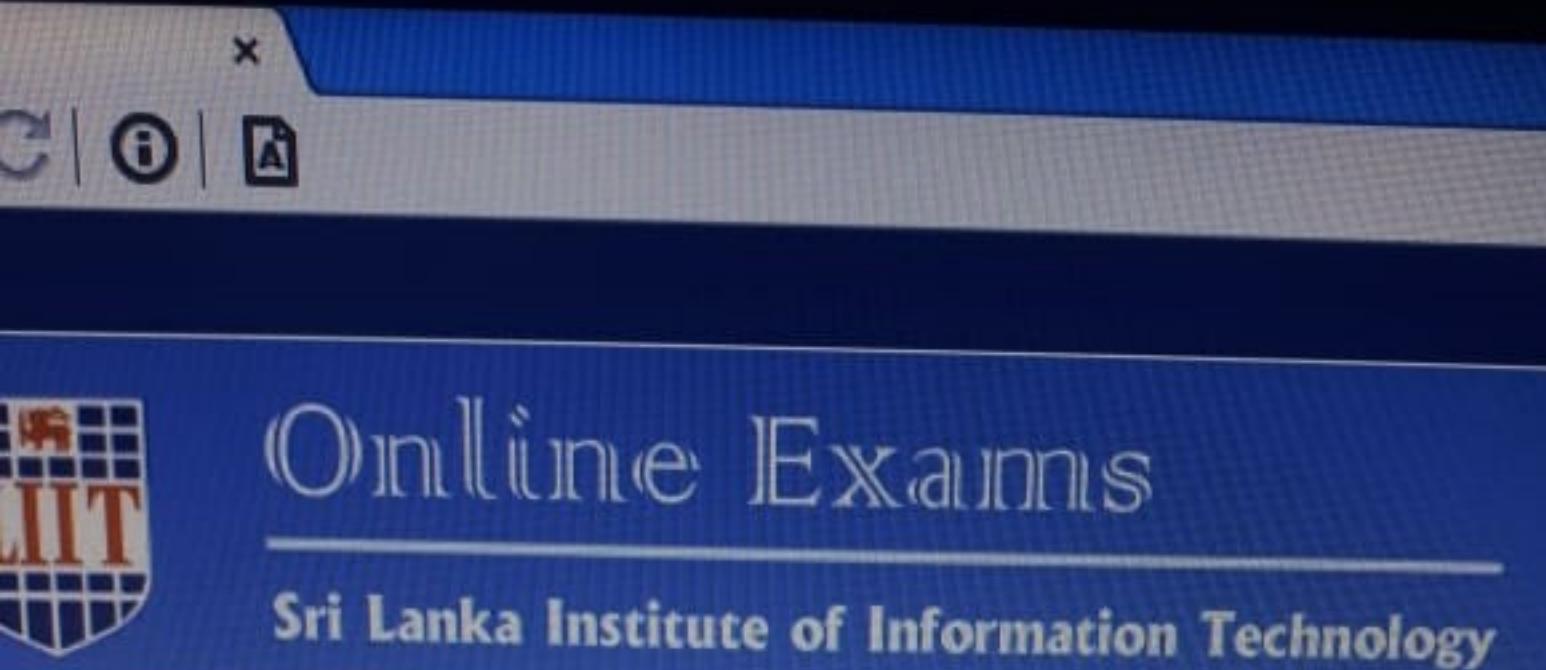
Find $A^2 - 2B + 3I$

Let $A^2 - 2B + 3I = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$

Answer for a_{11} Choose...

Answer for a_{12} Choose...

Answer for a_{21} Choose...



Following adjacency matrix represents an undirected graph.

$$\begin{bmatrix} 0 & 1 & 2 & 1 \\ 1 & 1 & 0 & 1 \\ 2 & 0 & 0 & 3 \\ 1 & 1 & 3 & 1 \end{bmatrix}$$

Find the following.

Number of loops

Number of edges

Number of vertices

Total degree

x



Consider the following system of linear equations.

$$2x - 4y = -10$$

$$3x - 5y = -11$$

Represent the above equations in $A\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} b \\ c \end{pmatrix}$ form.

Find $|A|$.

Find $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$

Choose... ▾

Answer for a

Choose... ▾

Answer for b

Choose... ▾

Answer for c

Choose... ▾

Answer for d

Choose... ▾

Answer for x

Choose... ▾

Answer for y

Choose... ▾

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$$A = \begin{bmatrix} 3 & 2 \\ 5 & 4 \end{bmatrix}$$

Find the determinant of the above matrix.:

Find the inverse of the matrix A. $A^{-1} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

a = :

b = :

c = :

d = :

(Write your answer with one decimal place)



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Indicate whether following matrix operations are commutative

Matrix Addition

Choose...



Matrix Multiplication

Choose...





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Question 23

Not yet answered

Marked out of
1.00

Flag question

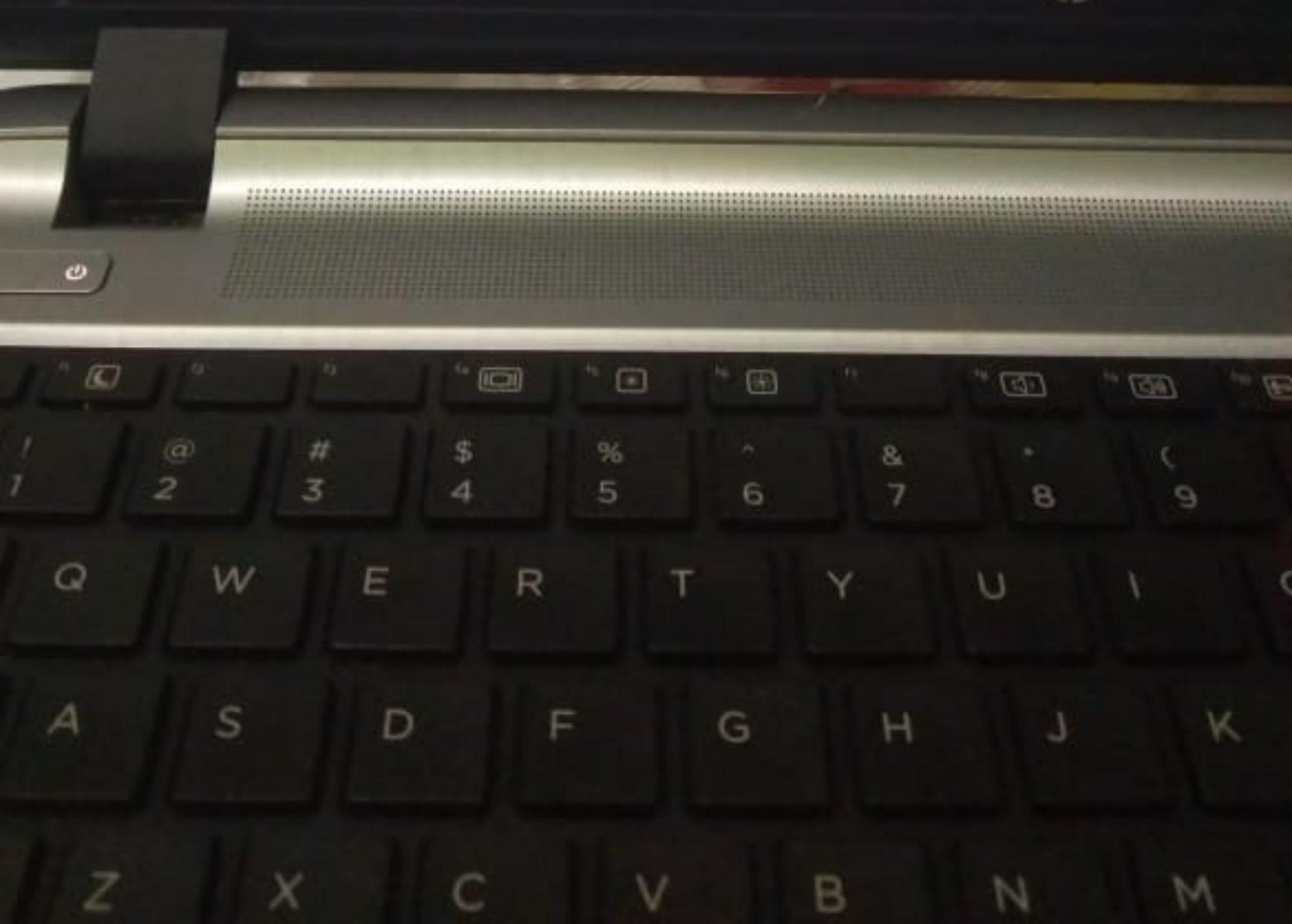
Consider the following function.

$$g: R \rightarrow R \quad g(x) = \frac{(12 - 3x)}{4}$$

Find $g^{-1}(-3)$

Hint : Find the inverse of g and substitute -3.

Answer:

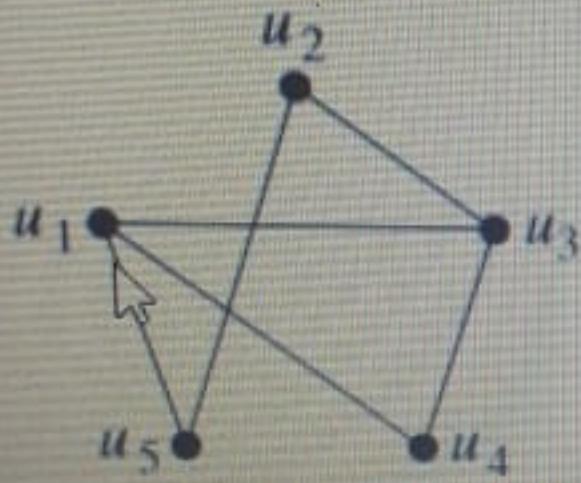


x

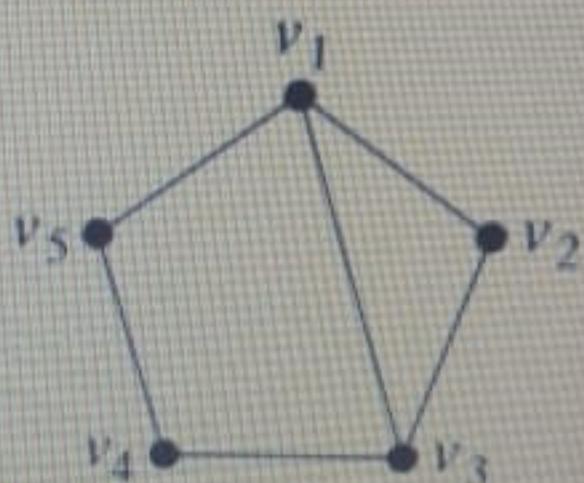


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What is the correct statement about the following 2 graphs?



G



H

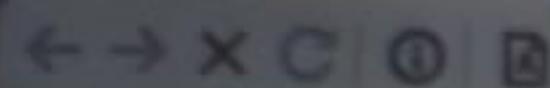
Select one:

• Two graphs are isomorphic

Two graphs are not isomorphic

The two graphs have different degree sequences

None of the above



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Error (-105)

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Consider the following system of linear equations.



$$x + y - z = -1$$

$$2x + y + 2z = 0$$

$$x - y - 2z = -6$$

Represent the above equations in $A\bar{x} = \bar{b}$ form.

Assume that you solve this using Cramer's Rule.

Then $y = \frac{|A_2|}{|A|}$

Answer for $|A_2|$ Choose...

Answer for $|A|$ Choose...

Answer for y Choose...

DELL

1er path & circuit

hamilton path

Factorise the following common expression

$$ABC + A + ABC$$

Factorise given

$$(A+C)$$

$$ABC + A + ABC$$

$$A + C$$

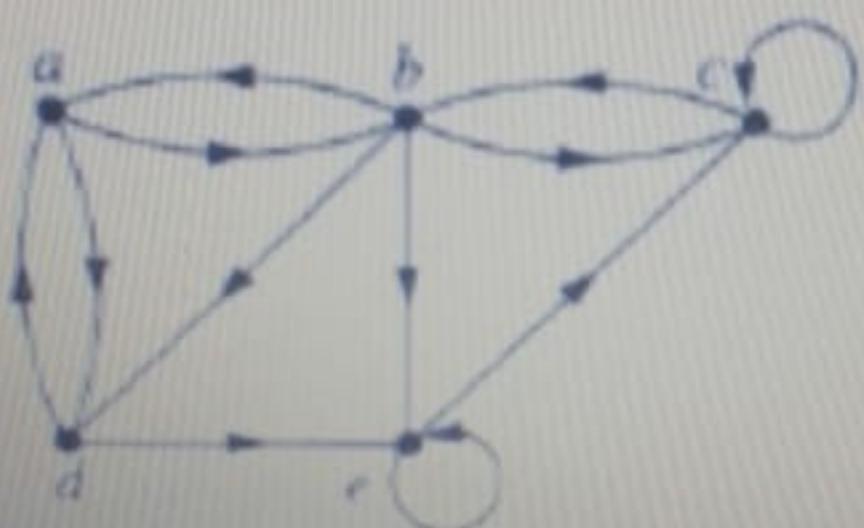
Sum of the terms



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Consider the following Directed Graph.



Number of Edges = :

Total Indegree = :

Total Outdegree = :



Let $A = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 0 \\ 6 & -2 \end{bmatrix}$

Find $A^2 + B^T - 2I$

Let $A^2 + B^T - 2I = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$

Answer for a_{11}

Choose...

Answer for a_{12}

Choose...

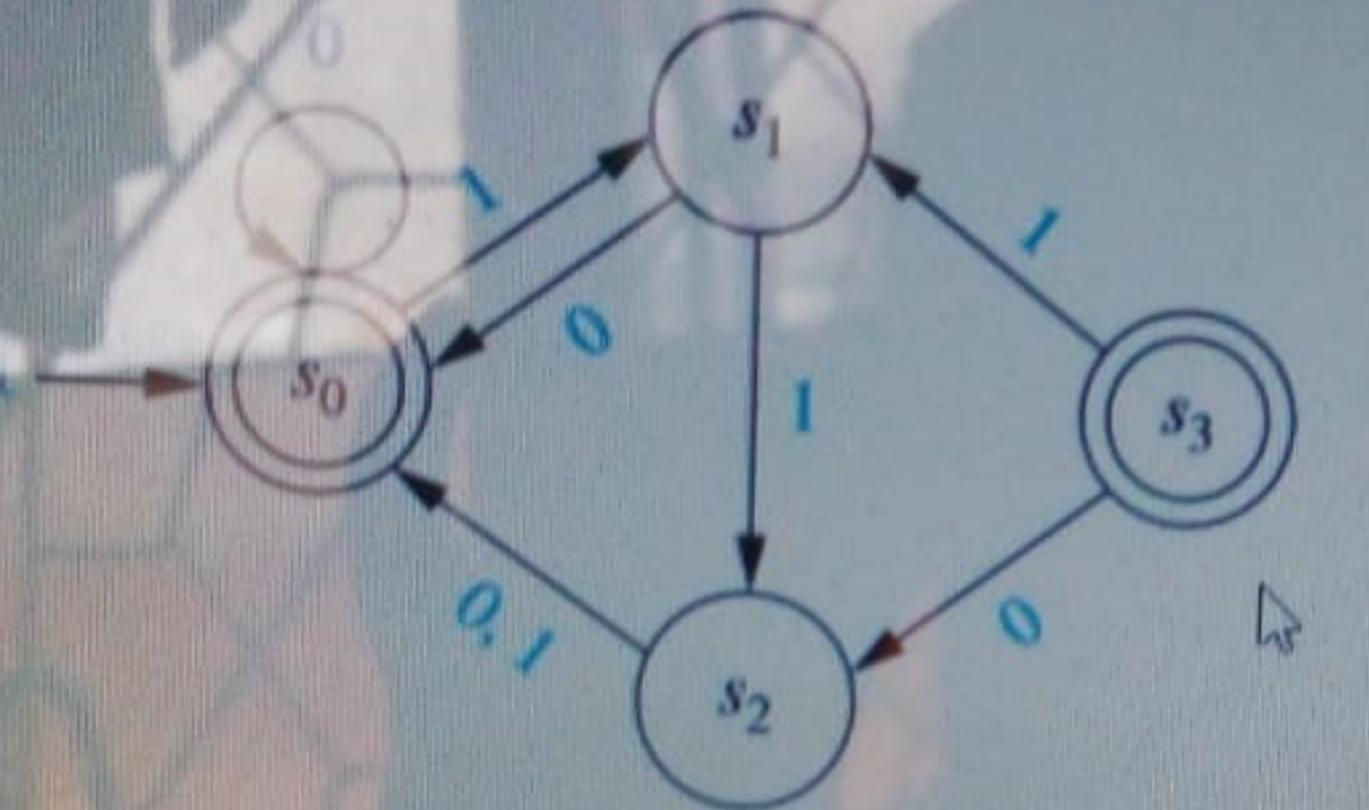
Answer for a_{21}

Choose...

Answer for a_{22}

Choose...

Consider the following finite state Machine A.



What is the initial State?

To what state does A go if 100101001 input to A in sequence starting from the initial state?

Find $N(s_1, 0)$

Find $N(s_2, 0)$

Choose... ▾

Choose...

s0

s1

s3

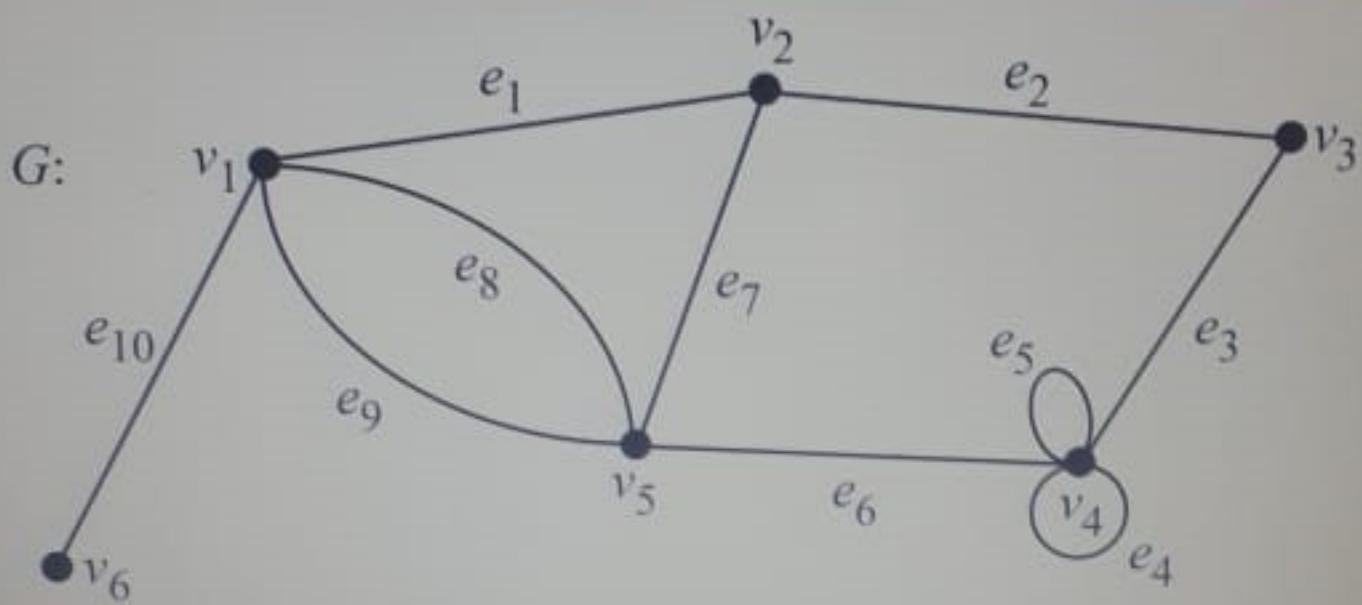
s2

Choose...



How many bit strings of length eight either start with a 0 bit or end with the two bits 11?

Answer:



Determine whether the above graph has the followings.

- | | |
|------------------|-----------|
| Hamilton Path | Choose... |
| Hamilton Circuit | Choose... |
| Euler Path | Choose... |
| Euler Circuit | Choose... |

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Simplify the following boolean expression.

$$AB + ABC + A \bar{B} \bar{C} + A \bar{C}$$

Select one:

$A(\bar{B} + C)$

A

$C + \bar{B}$

$A(B + \bar{C})$

None of the above

Question 11

Not yet answered

Marked out of
9.00 Flag question

Let $A = \begin{bmatrix} 2 & 3 & -1 \\ 1 & 0 & 4 \\ 5 & 2 & 3 \end{bmatrix}$

and $B=3A$; $C=B+2A-5I$. Find matrix D such that $D=2A+B-C$.

Assume I is the identity matrix.

$$D = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$$

$$a = : 5$$

$$b = : 0$$

$$c = : 0$$

$$d = : 0$$

$$e = : 5$$

$$f = : 0$$

$$g = : 0$$

$$h = : 0$$

$$i = : 5$$

N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = x^5 - 2x + 1$$

Is f a One to one function?

Choose... ▾

Is f an onto function?

Choose... ▾

Does f has an inverse function?

Choose... ▾

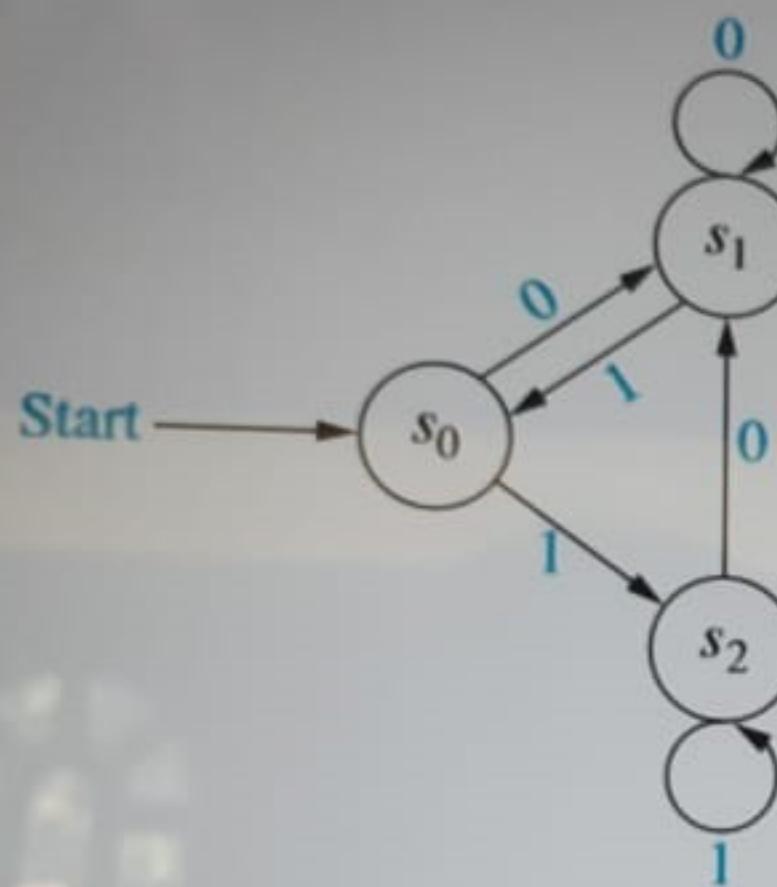
Question 13

Not yet answered

Marked out of
4.00

Flag question

Consider the following finite state Machine A.



What is the initial State?

To what state does A go if 100101001 input to A in sequence starting from the initial state?

Find $N(s_1, 0)$

Find $N(s_2, 0)$

Choose...

Choose...

s0

s1

s2

Quiz navigation

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

Finish attempt...

Time left 0:46:43

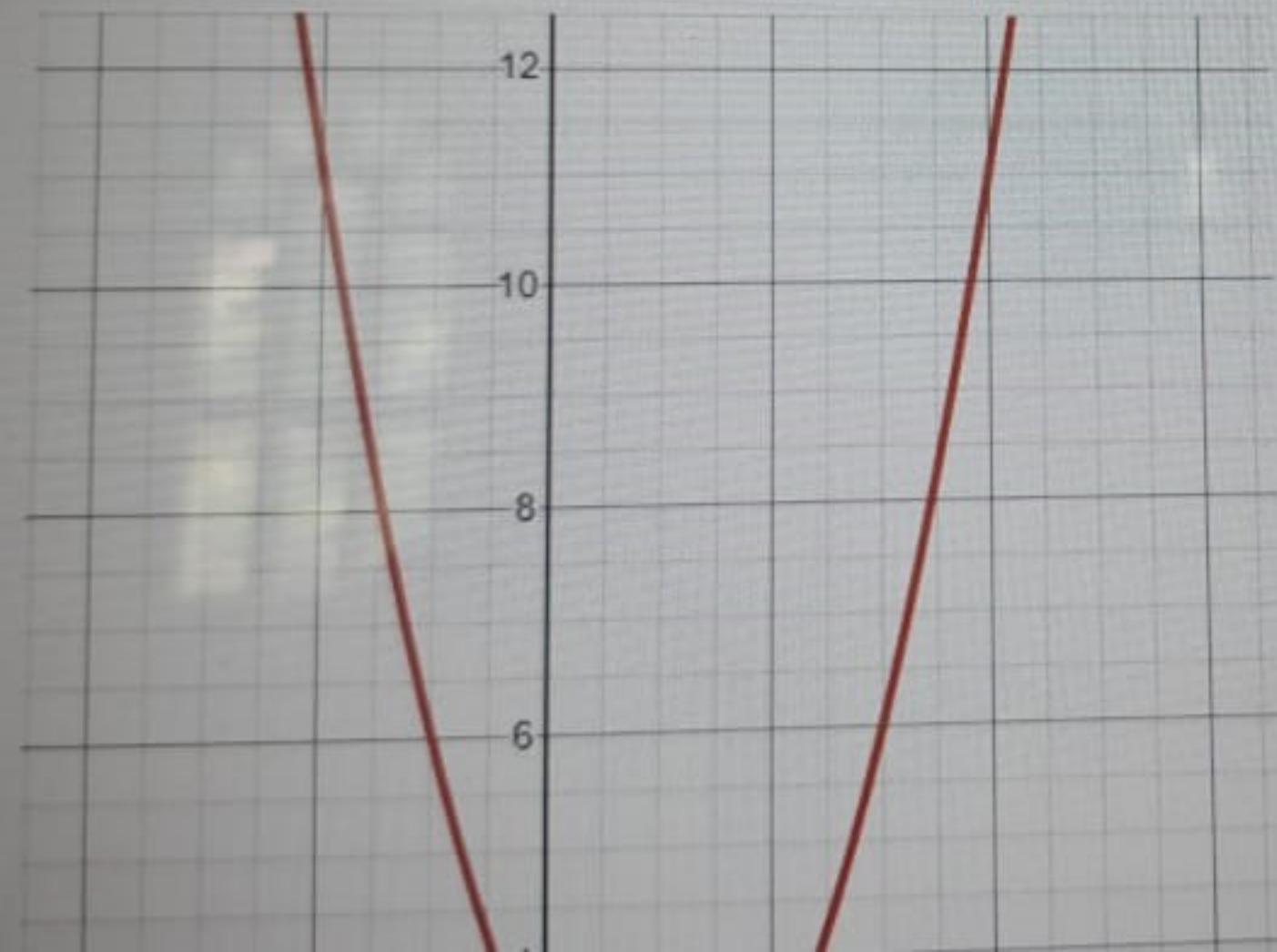
**Question 11**

Not yet answered

Marked out of
1.00

Flag question

Graph of $y = X^2 - 2x + 3$ is given below. Find the area under the curve from -2 to 4. (Round your answer to 2 decimal places)



Consider the following function.

$$g: R \rightarrow R \quad g(x) = \frac{(5x - 5)}{4}$$

Find $g^{-1}(-5)$

Hint : Find the inverse of g and substitute -5.

Answer:

X



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N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = n^3 + 3$$

Is f a One to one function?

Choose... ▾

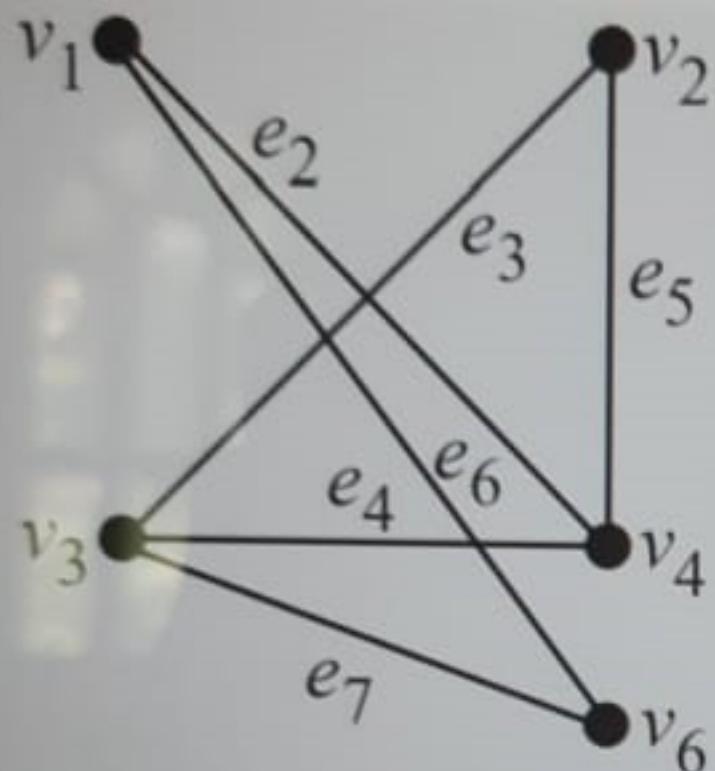
Is f an onto function?

Choose... ▾

Does f has an inverse function?

Choose... ▾

Consider the following graph.



Determine whether the above graph has the followings.

Hamilton Path

Choose... 

Hamilton Circuit

Choose...

Euler Path

Yes

Euler Circuit

No

Choose... 



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Question 6

Not yet answered

Marked out of
9.00

Flag question

Let $A = \begin{bmatrix} 5 & -2 & 1 \\ 4 & 1 & 0 \\ 1 & -2 & 2 \end{bmatrix}$

and $B=3A$; $C=B+2A-5I$. Find matrix D such that $D=2A+B-C$.

Assume I is the identity matrix.

$$D = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$$

a = :

b = :

c = :

d = :

e = :

f = :

g = :

h = :

i = :

Moodle

→ X C | B | A JEE ADVANCED INSTITUTE OF INFORMATION TECHNOLOGY

Question 18
Not yet answered
Marked out of 4.00
Flag question

Let A be a 2×2 matrix. Find $B = A^2 + 2A$

Let

$$A = \begin{bmatrix} -1 & 2 \\ -3 & 1 \end{bmatrix}$$

Let

$$B = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

Answer for a = :

Answer for b = :

Answer for c = :

Answer for d = :





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Question 7

yet answered

Marked out of

Flag question

Consider the following linear system of equations.

$$x - y - z = 0$$

$$x + 2y - z = 6$$

$$-2x + y + az = -5$$

Find the value of a if the above system of equations have no solution.

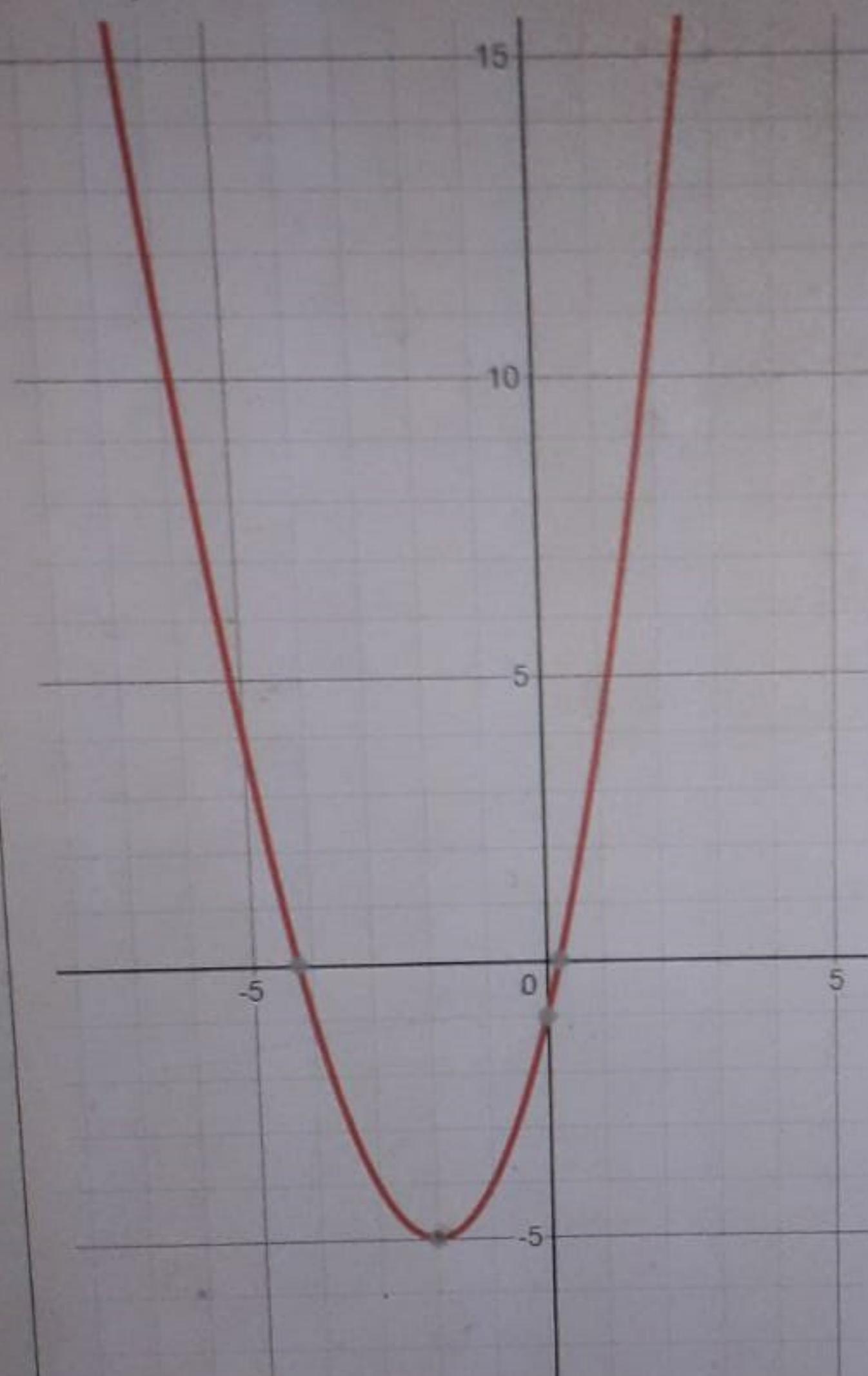
Answer:

Next page

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Graph of $y = x^2 + 4x - 1$ is given below. Find the area under the curve from -5 to 5.
(Round your answer to 2 decimal places)



Answer:

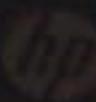
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In how many ways a committee consisting of 3 men and 2 women, can be chosen from 7 men and 5 women?

(No spaces should be there in the answer)

Answer:



Consider the following system of linear equations.

$$3x + 4y = 11$$

$$2x + 7y = 3$$

Represent the above equations in $A\underline{x} = \underline{b}$ form.

Find $|A|$.

Find $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$

Answer for a

Answer for b

Answer for c

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$$f(x) = \frac{x^2 + 1}{5x - 3}$$

Find $f'(-1)$.

Hint : Differentiate the function and Substitute -1.

(Write your answer as a fraction. Eg: 23/2
No spaces should be in the answer)

Answer:

$$2x + 3y = 14$$

$$3x - 2y = 19$$

Represent the above equations in $A\underline{x} = \underline{b}$ form.

Find $|A|$.

Find $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$

-17

Answer for a

-2

Answer for b

-3

Answer for c

-3

Answer for d

4

Answer for x

5

Answer for y

2



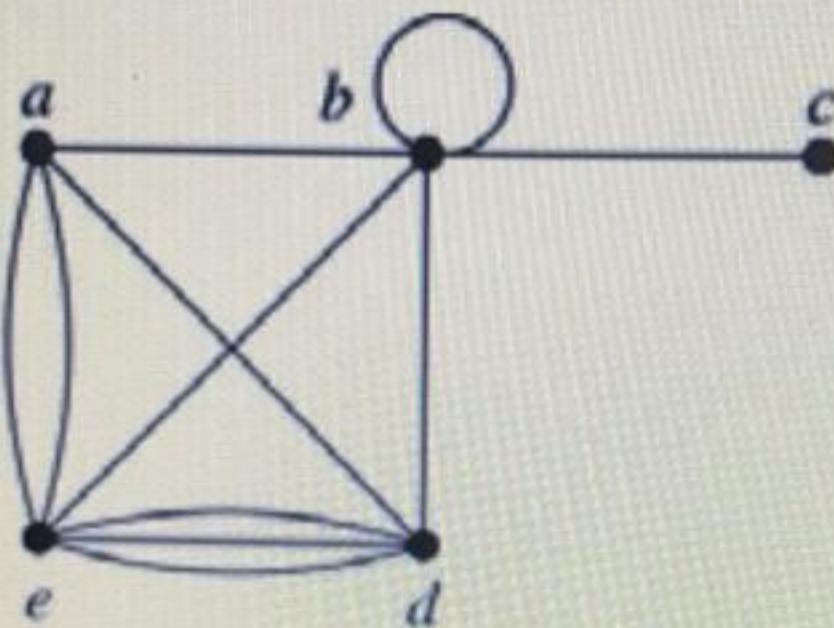
Question 6

Not yet answered

Marked out of
4.00

Flag question

Consider the following graph.



Determine whether the above graph has the following.

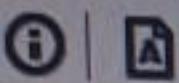
Hamilton Path Yes ▾

Hamilton Circuit No ▾

Euler Path Yes ▾

Euler Circuit No ▾

x



Consider the following system of linear equations.

$$2x + 4y = 22$$

$$3x - 2y = 1$$

Represent the above equations in $A\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} b \\ c \end{pmatrix}$ form.

Find $|A|$.

Find the $\text{adj } A$

Let $\text{adj } A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

Find x and y .

Answer for $|A|$ Choose... ▾

Answer for a Choose... ▾

Answer for b Choose... ▾

Answer for c Choose... ▾

Answer for d Choose... ▾

Answer for x Choose... ▾

If $|A| = 43$ then find the cofactor matrix of A

answered

out of

question

$$A = \begin{bmatrix} 1 & 2 & 7 \\ 4 & -3 & x \\ 2 & 2 & 5 \end{bmatrix}$$

C_{11} ▾

C_{12} ▾

C_{13} ▾

C_{21} ▾

C_{22} ▾

C_{23} ▾



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n 8

answered

out of

question

$$A = 111011 + 10001010$$

Find the 2's Complement of A.

(No spaces should be there in your answer)

Answer: 10101011

[]



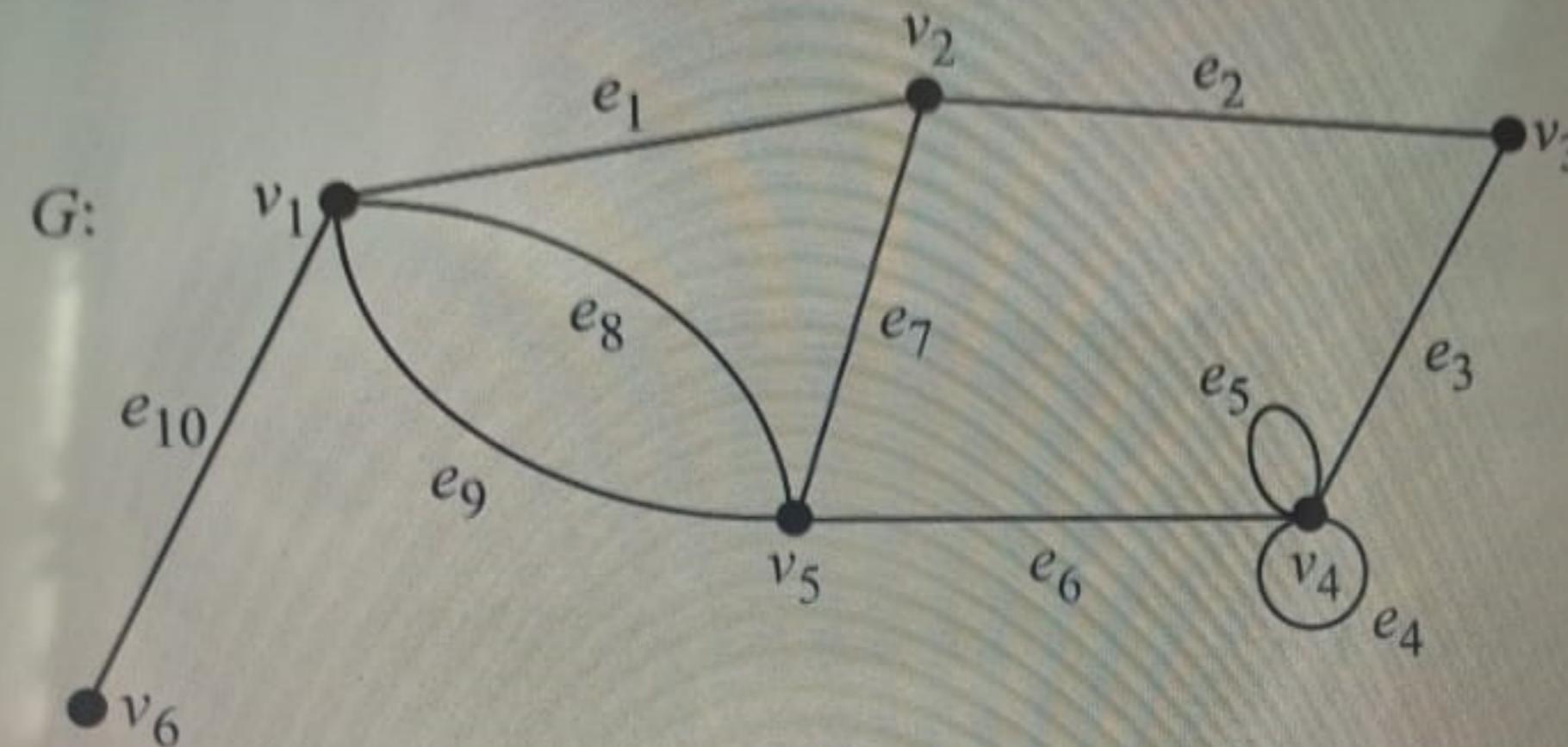
Question 6

Not yet answered

Marked out of
4.00

Flag question

Consider the following graph.



Determine whether the above graph has the followings.

Hamilton Path

Choose... ▾

Hamilton Circuit

Choose... ▾



REDMI NOTE 8 PRO

AI QUAD CAMERA

Euler Path

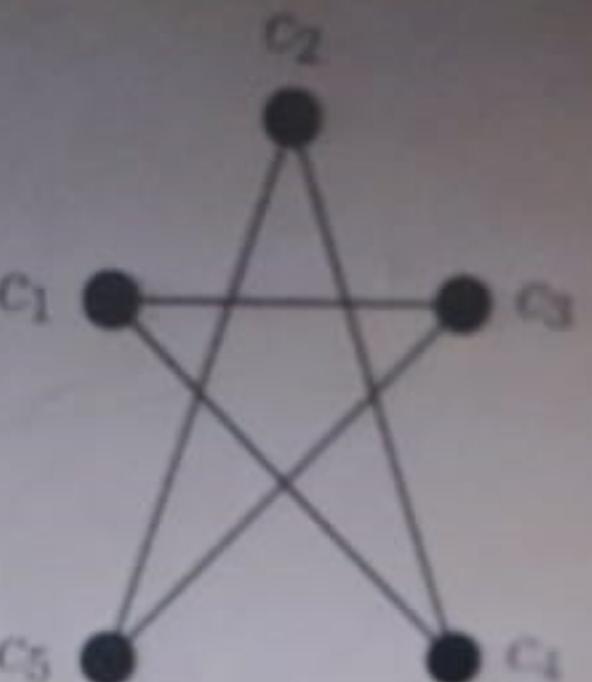
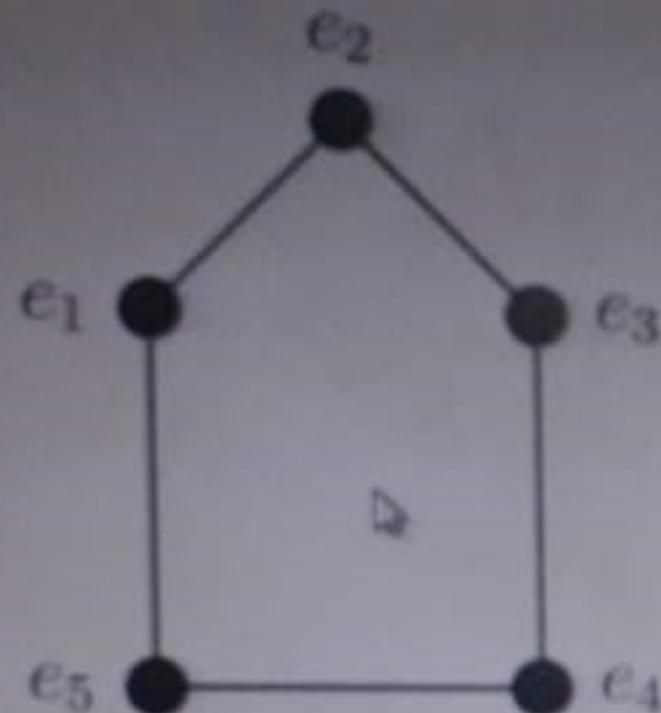
Choose... ▾

≡ Quiz nav

1	2	3
▲		
8	9	10
15	16	17
22	23	24
29	30	31

Finish attempt

Time left 1:05:35



Select one:

- Two graphs are isomorphic
- Two graphs are not isomorphic
- The two graphs have different degree sequences
- None of the above



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Question 7

Not yet answered

Marked out of
0.00

Flag question

N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = x^3 - 2x + 1$$

Is f a One to one function?

No ▾

Is f an onto function?

No ▾

Does f has an inverse function?

No ▾



Simplify the following boolean expression.

$$F = A + \overline{A}B + \overline{A}\overline{B}C + \overline{A}\overline{B}\overline{C}D + \overline{A}\overline{B}\overline{C}\overline{D}E$$

Select one:

- F = A + B + C + CDE
- F = A + B + C + DE
- F = A + B + C + D + E
- F = A + B + B(C + DE)
- None of the above

A committee of 5 people is to be chosen from a group of 6 men and 4 women. How many committees are possible if the majority should be women?

(No spaces should be there in the answer)

Answer:





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Total number of words formed by 2 vowels and 3 consonants taken from 4 vowels and 5 consonants is equal to
(No spaces should be there in the answer)

Answer:



Next page

≡ Quiz navigation

1	2	3	4
▲			
8	9	10	11
15	16	17	18
22	23	24	25
29	30	31	32

Finish attempt...

Time left 1:13:08



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$$A = \begin{bmatrix} 3 & 2 \\ 5 & 4 \end{bmatrix}$$

Find the determinant of the above matrix.:

Find the inverse of the matrix A. $A^{-1} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$

a = :

b = :

c = :

d = :



(Write your answer with one decimal place)

DELL



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tion 3

et answered

ed out of

lag question

Solve for X.

$$X + \begin{bmatrix} -1 & 0 \\ 0 & 2 \end{bmatrix} = \begin{bmatrix} 2 & 6 \\ 1 & 5 \end{bmatrix} + \begin{bmatrix} -4 & -8 \\ -2 & 0 \end{bmatrix}$$

$$X = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$$

Answer for a_{11} -1 ▾



Answer for a_{12} -2 ▾

Answer for a_{21} -1 ▾

Answer for a_{22} 3 ▾



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Question 4

yet answered

Marked out of

0

Flag question

Let A be a 2×2 matrix. Find $B = A^2 + 2A$

Let

$$A = \begin{bmatrix} -1 & 2 \\ -3 & 1 \end{bmatrix}$$

Let

$$B = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

Answer for a = :

Answer for b = :

Answer for c = :

Answer for d = :

Let $A = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 0 \\ 6 & -2 \end{bmatrix}$

Find $A^2 - 2AB - B^T$

Let $A^2 - 2AB - B^T = \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}$

Answer for a_{11}

Choose... ▾

Answer for a_{12}

Choose... ▾

Answer for a_{21}

Choose... ▾

Answer for a_{22}

Choose... ▾

$$r'_2 = r_2 + 2r_1$$

$$\begin{bmatrix} 1 & -1 & 3 & -4 \\ -2 & 2 & 1 & 0 \\ -1 & -1 & 0 & 2 \end{bmatrix} \rightarrow \begin{bmatrix} 1 & -1 & 3 & -4 \\ p & q & r & s \\ a & b & c & d \end{bmatrix}$$

$$r'_3 = r_3 + r_1$$

Find the values of the second matrix, after carrying out

Answer for p

Choose... *

Answer for q

Choose... *

Answer for r

Choose... *

Answer for s

Choose... *

Answer for a

Choose... *

Answer for b

Choose... *

Answer for c

Choose... *

Answer for d

Choose... *



Consider the following function.

$$g: R \rightarrow R \quad g(x) = \frac{(-2x + 1)}{3}$$

Find $g^{-1}(-3)$

Hint : Find the inverse of g and substitute -3.

Answer:

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N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = x^4 - 2x + 1$$

Is f a One to one function?

Choose... ▾

Is f an onto function?

Choose... ▾

Does f has an inverse function?

Choose... ▾

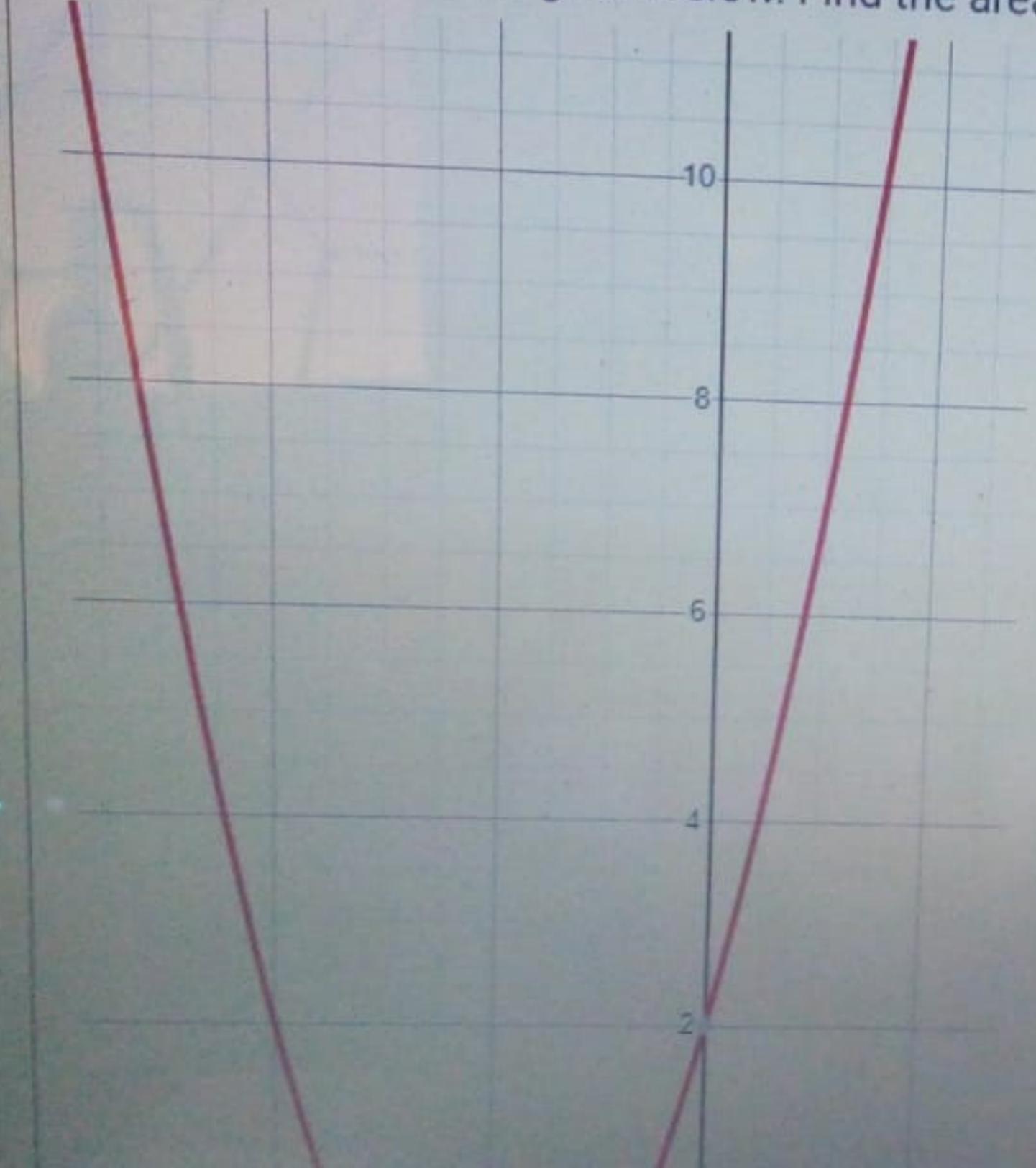
Question 3

Not yet answered

Marked out of
1.00

Flag question

Graph of $y = X^2 + 4x + 2$ is given below. Find the area under the curve from -4 to 2.



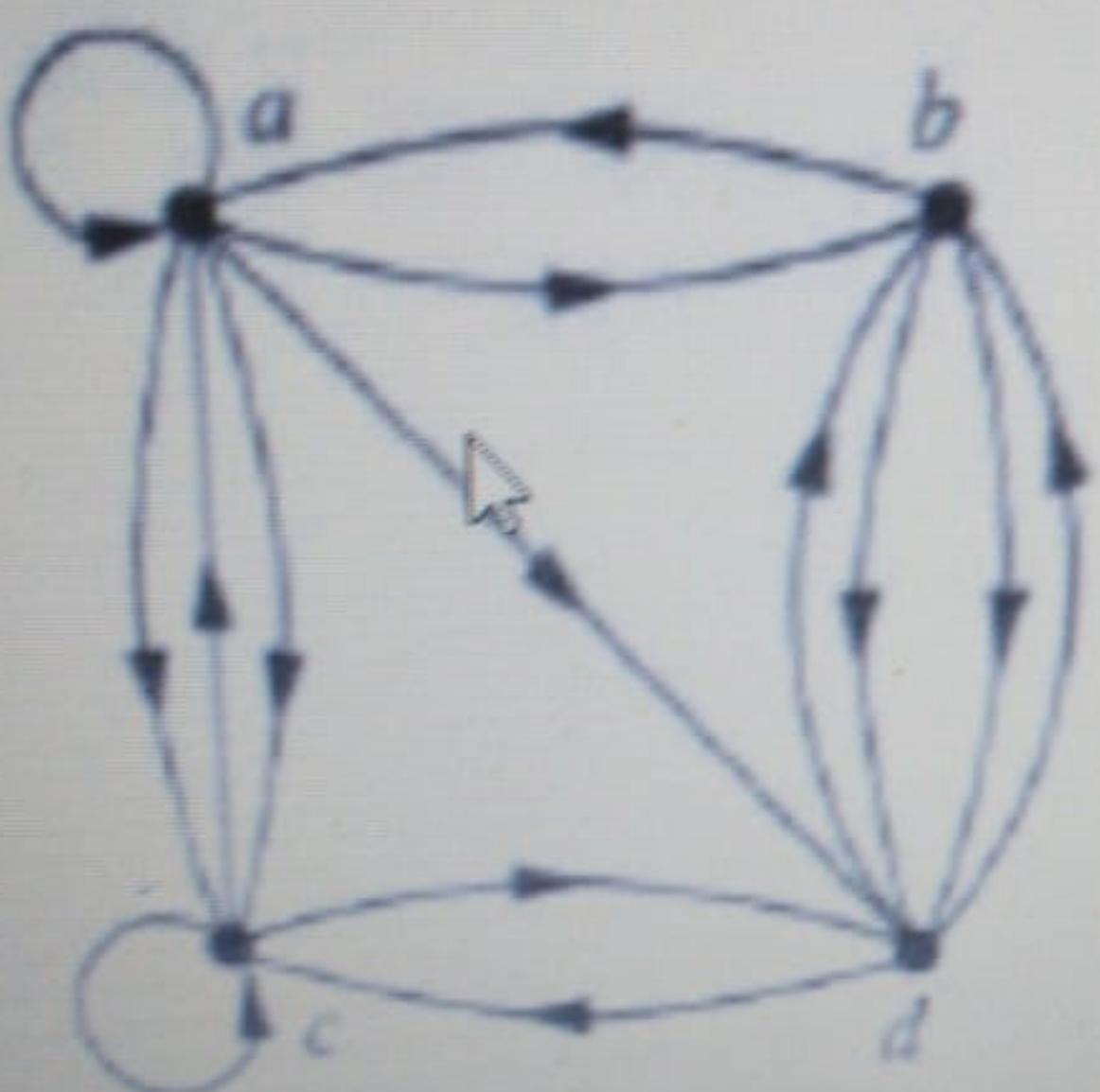
Qui

1	2
8	9
15	16
22	23
29	30

Finish attempt

Time left 1:38:1

Consider the following Directed G



Number of Edges = :

Total Indegree = :

Total Outdegree = :

If $|A| = -35$ then find the cofactor matrix of A.

$$A = \begin{bmatrix} 1 & -2 & 2 \\ 3 & 4 & 5 \\ 2 & 1 & x \end{bmatrix}$$

C_{11} Choose... ▾

C_{12} Choose... ▾

C_{13} Choose... ▾

C_{21} Choose... ▾

C_{22} Choose... ▾

C_{23} Choose... ▾

C_{31} Choose... ▾



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N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = n + 3$$

Is f a One to one function?

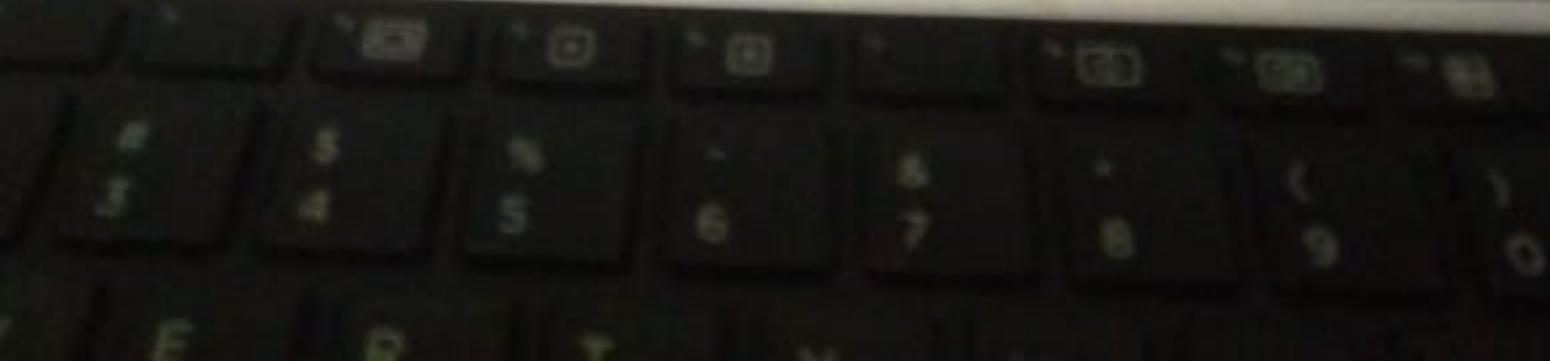
Yes

Is f an onto function?

Yes

Does f has an inverse function?

Yes



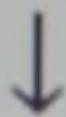


12

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1 out of
g question

Find the values of the resulting matrix.

$$\begin{bmatrix} 1 & 0 & 0 & 1 & 0 & -1 \\ -1 & 1 & 2 & -2 & 1 & 0 \\ 0 & 0 & 1 & 1 & 2 & 1 \end{bmatrix}$$



$$\begin{bmatrix} 1 & 0 & 0 & 1 & 0 & -1 \\ 0 & 1 & 0 & a & b & c \\ 0 & 0 & 1 & d & e & f \end{bmatrix}$$

 $a =$ Choose... $b =$ Choose... $c =$ Choose... $d =$ Choose... $e =$ Choose... $f =$ Choose...

wered
of
estion

$$\text{Let } A = \begin{bmatrix} 4 & 3 & 1 \\ 5 & 0 & 6 \\ 5 & 2 & 3 \end{bmatrix}$$

and $B=3A$; $C=B+2A-5I$. Find matrix D such that $D=2A+B-C$.

Assume I is the identity matrix.

$$D = \begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$$

a = :

b = :

c = :

d = :

e = :

f = :

g = :

h = :

i = :

DELL

Euler path & circuit



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path Cover all edges

hamilton path

* It should cover

If $|A| = 64$ then find the cofactor matrix of A.

$$A = \begin{bmatrix} 0 & 2 & 5 \\ 4 & x & 3 \\ 2 & 1 & -4 \end{bmatrix}$$

C_{11} Choose... ▾



C_{12} Choose... ▾

C_{13} Choose... ▾

C_{21} Choose... ▾

C_{22} Choose... ▾

C_{23} Choose... ▾

C_{31} Choose... ▾

C_{32} Choose... ▾



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ion 4

et answered

ed out of

ng question

How many different license plates can be made if each plate contains a sequence of three uppercase English letters followed by three digits (and no sequences of letters are prohibited, even if they are obscene)?

Answer:

Next page