Moodle

Online Exams

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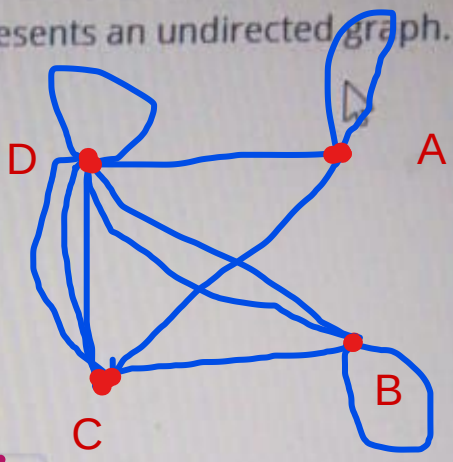
Flag question

Following adjacency matrix represents an undirected graph.

	A	B	C	D
A	1	0	1	1
B	0	1	1	2
C	1	1	0	3
D	1	2	3	1



Find the following.

Number of loops 3 ✓

Number of edges 11 ✓

Number of vertices 4 Number of rows/colums

Total degree 22 22

2 * edges
or
Total element + loop

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Question 15

Not yet answered

Marked out of 1.00

Flag question

Find the values of the resulting matrix.

$$\begin{bmatrix} 1 & 0 & 0 & 1 & 1 & 0 \\ -1 & 1 & 0 & -1 & 0 & 1 \\ -2 & 0 & 1 & 2 & 1 & 1 \end{bmatrix} \begin{matrix} r1 \\ r2 \\ r3 \end{matrix}$$

$r2' = r2 + r1$

$r3' = r3 + 2\,r1$

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

a=0 b=1 c=1

d=4 e=3 f=1

1 0 0 1 1 0

0 1 0 0 1 1

0 0 1 4 3 1

a = Choose...

b = Choose...

C = Choose...

d = Choose...

e = Choose...

f = Choose...

Quiz navigati

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 0:01:16

Question 13

Not yet answered

Marked out of 9.00

Flag question

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

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

$$C = \begin{bmatrix} 4 & -8 & 24 \\ 41 & 14 & -10 \\ 23 & 14 & -10 \end{bmatrix}$$

C_{11} Choose...

C_{12} Choose...

C_{13} Choose...

C_{21} Choose...

C_{22} Choose...

$|A| = x4.3 + 5.1.(-2) + 7.2.8 - (7.4.(-2) + x.1.8 + 5.2.3)$

$|A| = 128$

$x = 0$

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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...

a=0
b=2
c=1
d=-2
e=3

Quiz navig

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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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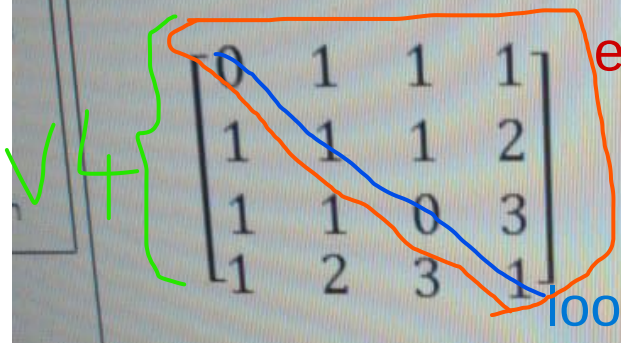
Following adjacency matrix represents an undirected gra



Find the following.

Number of loops	2	
Number of edges	10	11
Number of vertices	4	Number of row or collum
Total degree	Choose...	22

2 * edges
or
Total element + loop

Machine View Input Devices Help

oodle

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tion 5

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ag question

Solve the equation A = B when,

$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 1 & 2 \\ 0 & 2 & 3 \end{bmatrix}.$$

x=1
x^2-y=2
y=-1

Select one:

- x = -1 , y = 1
- x = -2 , y = - 2
- x = 1 , y = - 1
- x = 2 , y = - 2
- None of the above

Machine View Input Devices Help

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tion 2

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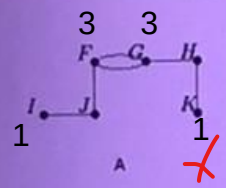
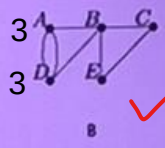
g question

Which of these graphs have Euler Paths?

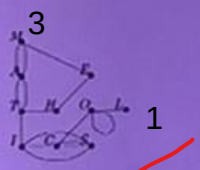
(Hint: A theorem for Euler paths can be used.)



A



B

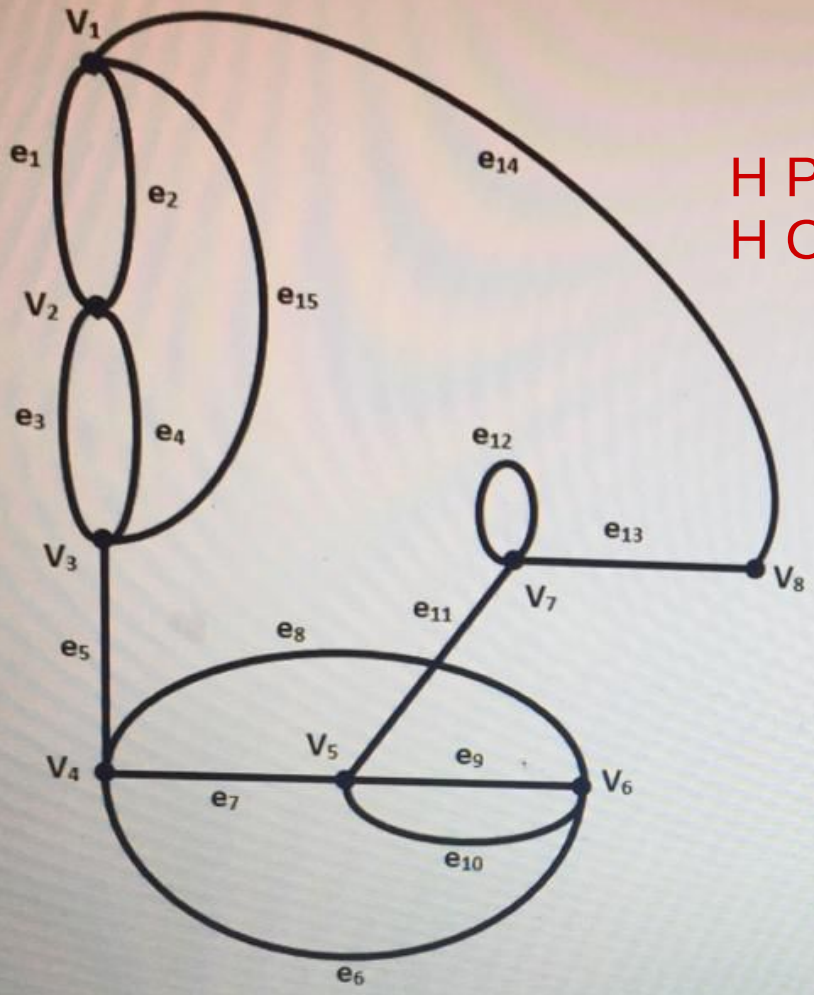


C

Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

Euler path = Only 2 odd degree



H Path = v8 v1 v2 v3 v4 v6 v5 v7
H Circuit = v8 v1 v2 v3 v4 v6 v5 v7 v8

Select the correct Hamilton circuit. Choose...

Select the correct Hamilton path. Choose...

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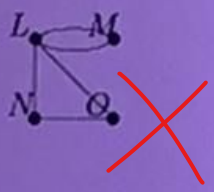
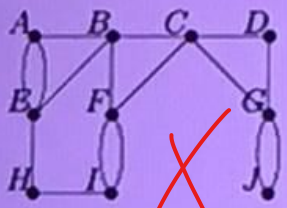
ag question

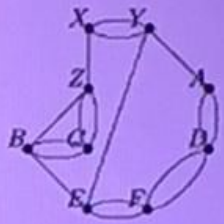
Which of these have Hamiltonian Circuits?



A



B



C

Select one:

- A only
- A and B only
- C only
- A and C only
- None of the above

Hamiltonian = vertices can not repeated

Question 01 (20 marks)

(i) Find an equation of the tangent line to the curve $y = x^3 + 2x$ at the point (2,12).

y= x^3 + 2x

x=2, y=12, m?, c?

12 = m*2^3+2*2

m = 1

y= m*x+c

12=1*2 + c

c= 10//

y=x+10

(ii) Find the length of the subtending arc when $\theta = 60^\circ$ and $r = 5$. (4 marks)

?

(iii) Find the indefinite integral $\int (x^3 + 6x - 2)dx$. (4 marks)

$$\int x^3 + 6x - 2 \quad dx$$

$$\frac{x^4}{4} + 3x^2 - 2x + c$$

Page 1 of 10

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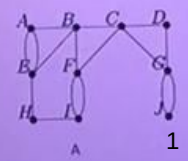
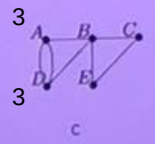
Which of these do not have Euler Circuits?



A

B



C

Select one:

- A only
- B only
- C only
- All graphs
- None of the above

Euler Circuits = Even degree only

Next page

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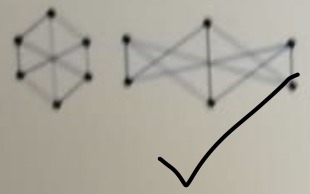
Question 8

Not yet answered

Marked out of 1.00

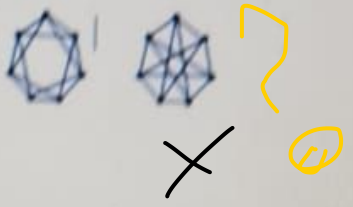
Flag question

Which of the following pairs are isomorphic?



A

B



C

Select one:

- A and B only
- A and C Only
- B and C only
- All are isomorphic
- None of the above

1. Vertices =
2. edges =
3. sequence
4. matching order =
5. total degree=

Finish

Time le

1

B

Next page

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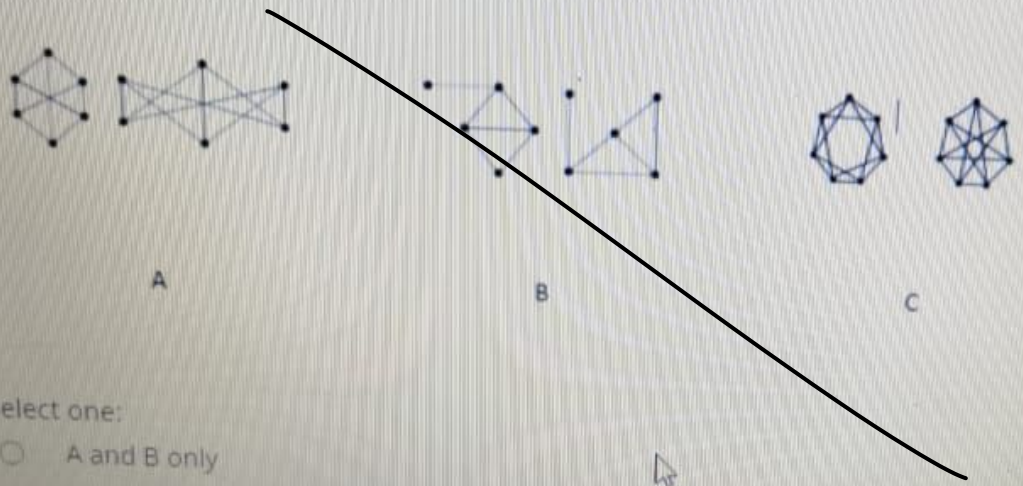
Question 8

Not yet answered

Marked out of 1.00

Flag question

Which of the following pairs are isomorphic?



Select one:

- A and B only
- A and C Only
- B and C only
- All are isomorphic
- None of the above

Finish

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Question 8

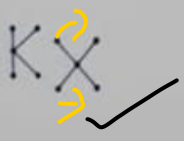
Not yet answered

Marked out of 1.00

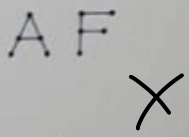
Flag question

Which of the following pairs are isomorphic?

A



B



C

Select one:

- A and B only
- B and C only
- A and C only
- All are isomorphic
- None of the above

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Solve the equation A = 2B when,

$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 1/2 & 1 \\ 0 & 1 & 3/2 \end{bmatrix}.$$

Select one:

- x = -1 , y = 1
- x = -2 , y = - 2
- x = 1 , y = - 1
- x = 2 , y = 2
- None of the above

x=2

x^2 - y = 2

y=2

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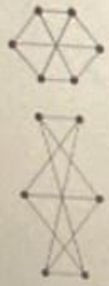
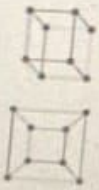
Which of the following pair of graphs are isomorphic?



A

B



C

Select one:

- A only
- B only
- A and B only
- All pairs are isomorphic
- None of the above

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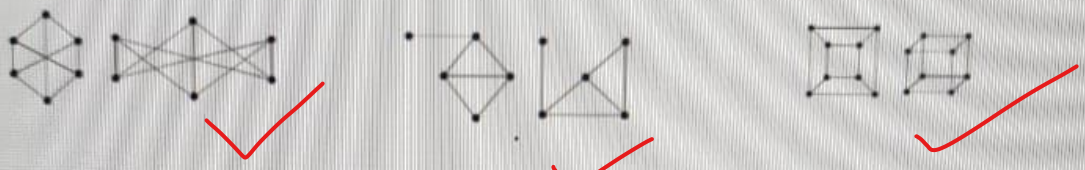
Which of the following pairs are isomorphic?



A B C

Select one:

- A and B only
- A and C only
- B and C only
- All pairs
- None of the above

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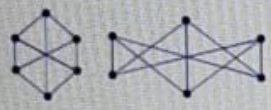
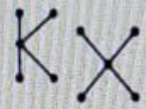
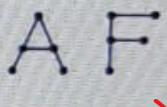
Which of the following pairs are non isomorphic?



A



B



C

Select one:

- A only
- B only
- C only
- All are non isomorphic
- None of the above

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Question 7

Not yet answered

Marked out of 1.00

Flag question

Find the product of the following 2 matrices.

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

Select one:

- $\begin{bmatrix} -10 & -20 \\ 10 & -16 \\ 18 & -24 \end{bmatrix}$
- $\begin{bmatrix} -15 & 5 \\ 18 & -6 \\ 0 & 0 \end{bmatrix}$
- $\begin{bmatrix} -8 & 14 \\ 33 & 6 \\ -24 & -60 \end{bmatrix}$
- $\begin{bmatrix} -8 & 14 \\ 33 & 6 \\ -24 & 6 \end{bmatrix}$
- None of the above

Question 8

Not yet answered

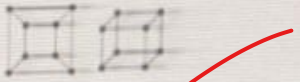
Marked out of 1.00

Flag question

Which of the following pairs are isomorphic?

A

B



C

Select one:

- A and B only
- A and C only
- B and C only
- All pairs
- None of the above

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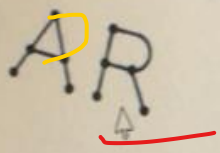
Question 8

Not yet answered

Marked out of 1.00

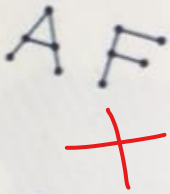
Flag question

Which of the following pairs are non isomorphic?



A

B



C

Select one:

- A only
- B only
- C only
- A and C only
- None of the above

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Find the following product.

$$\begin{bmatrix} 0 & 2 \\ -2 & -5 \end{bmatrix}\begin{bmatrix} 6 & -6 \\ 3 & 0 \end{bmatrix}$$

Select one:

- $\begin{bmatrix} -30 & 24 \\ 15 & -12 \end{bmatrix}$
- $\begin{bmatrix} 6 & 0 \\ -27 & 12 \end{bmatrix}$
- $\begin{bmatrix} -5 & -10 \\ 8 & 13 \end{bmatrix}$
- $\begin{bmatrix} -14 & -3 \\ -19 & 22 \end{bmatrix}$
- None of the above

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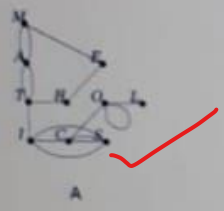
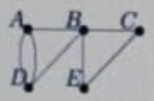
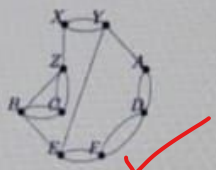
Which of these graphs have Hamiltonian Paths?



A



B



C

Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

All vertices should cover

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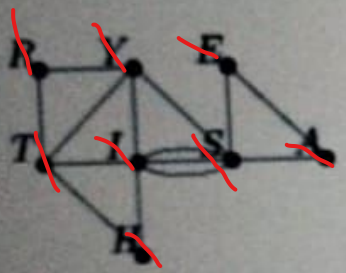
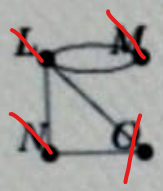
Which of these graphs **do not** have Euler Paths?

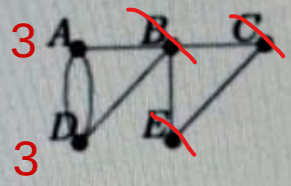
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- A and B Only
- B and C only
- A and C only
- All graphs
- None of the above

Euler path need 2 odd degree

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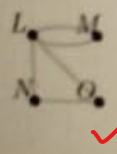
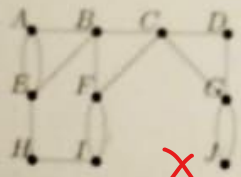
Which of these have Hamiltonian Circuits?



A



B

C

Select one:

- A only
- A and B only
- C only
- A and C only
- None of the above

Question 2

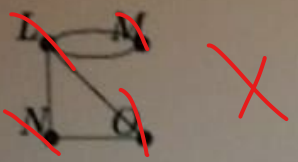
Not yet answered

Marked out of 1.00

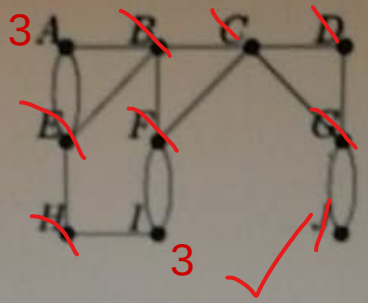
Flag question

Which of these have Euler Paths?

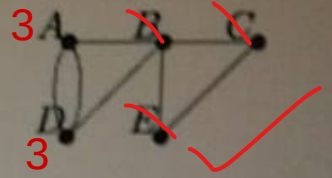
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

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9

answered

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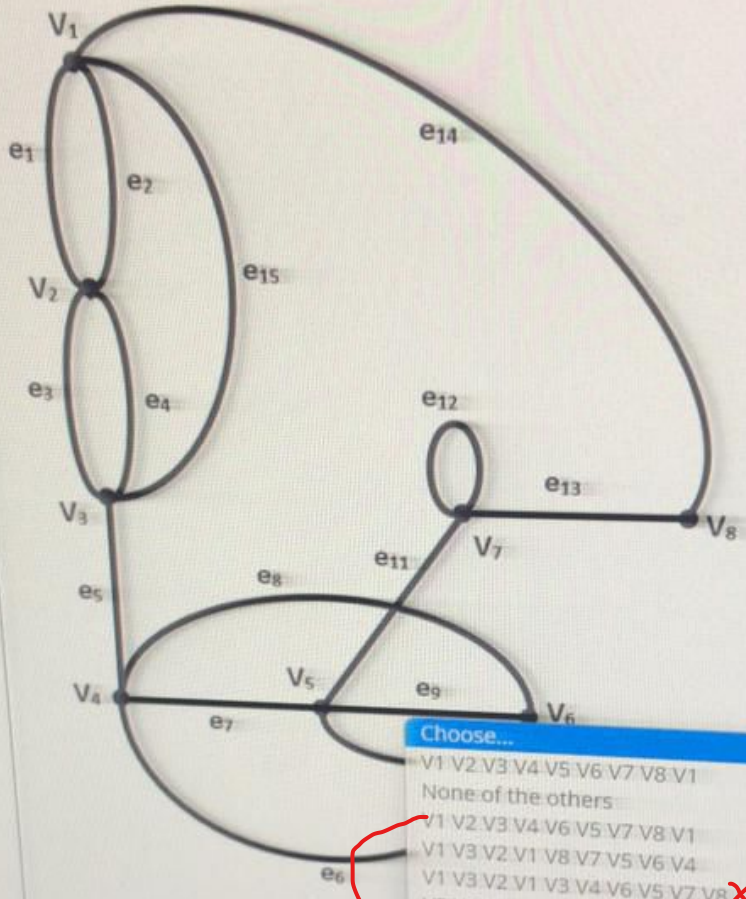
sg question

For the given graph.



Choose...
V1 V2 V3 V4 V5 V6 V7 V8 V1
None of the others
V1 V2 V3 V4 V6 V5 V7 V8 V1
V1 V3 V2 V1 V8 V7 V5 V6 V4
V1 V3 V2 V1 V3 V4 V6 V5 V7 V8
V5 V6 V4 V3 V2 V1 V8 V7
V1 V8 V7 V5 V4 V3 V2

Select the correct Hamilton circuit: Choose...

Select the correct Hamilton path: Choose...

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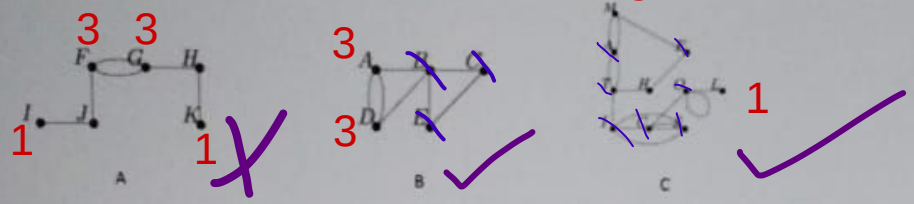
Which of these graphs have Euler Paths?

(Hint: A theorem for Euler paths can be used.)



Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

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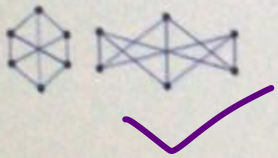
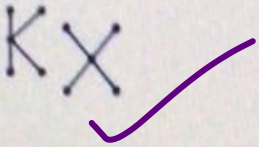
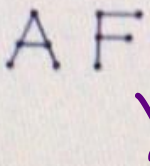
Which of the following pairs are isomorphic?



A



B



C

{1 1 2 3 3} != {1 1 1 2 3 }

Select one:

- A and B only
- B and C only
- A and C only
- All are isomorphic
- None of the above

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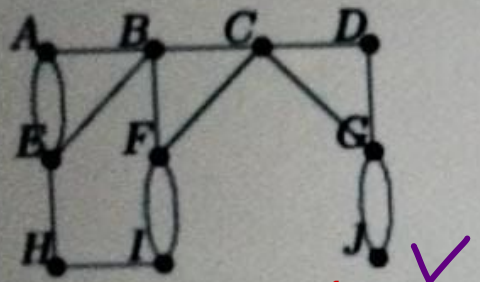
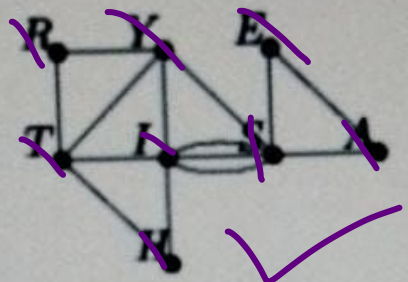
Which of these have Euler Circuits?

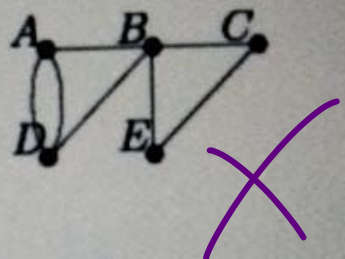


A

1



B



C

Select one:

- A only
- B only
- C only
- All graphs
- None of the above

Euler circuit = only even degrees

dle

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5

answered

out of

question

Solve the equation A = B when,

$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 2 & 1 & 2 \\ 0 & 2 & 3 \end{bmatrix}.$$

Select one:

- x = -1 , y = 1
- x = -2 , y = - 2
- x = 1 , y = - 1
- x = 2 , y = - 2
- None of the above

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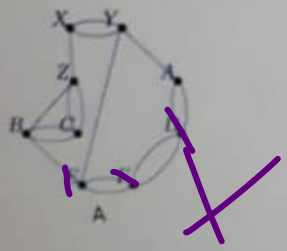
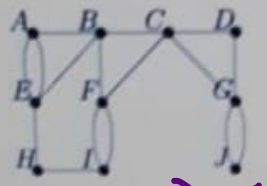
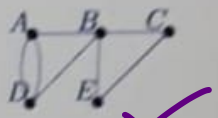
Which of these do not have Euler Circuits?



A



B



C

Select one:

- None of the above
- C only
- A only
- B only
- All graphs

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Question 2

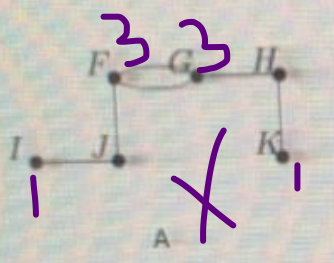
Not yet answered

Marked out of 1.00

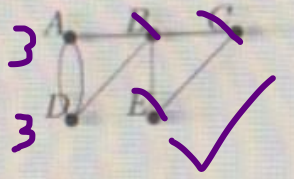
Flag question

Which of these graphs have Euler Paths?

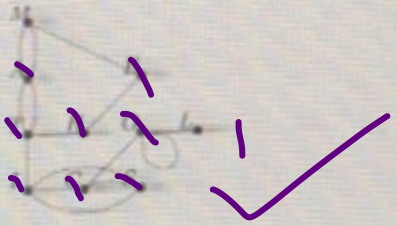
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

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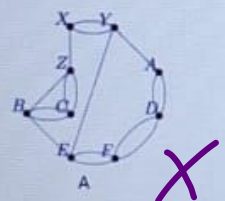
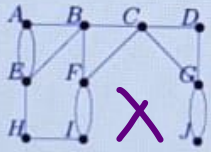
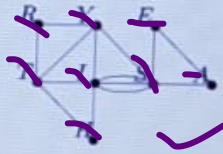
Which of these do not have Euler Circuits?



A



B



C

Select one:

- A and B only
- B and C only
- A and C only
- All graphs
- None of the above

Moodle

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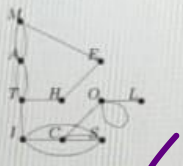
Question 4

Not yet answered

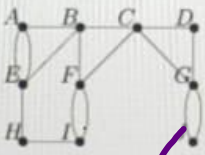
Marked out of 1.00

Flag question

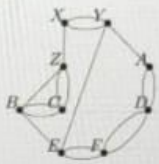
Which of these graphs have Hamiltonian Paths?



A



B



C

Select one:

- A only
- A and B only
- B and C only
- All graphs
- None of the above