PROPRIEDADES DOS DETERMINANTES

Atividade Básica

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1. (UESPI)

|  |  |  |
| --- | --- | --- |
| P | 2 | 2 |
| P | 4 | 4 |
| P | 4 | 1 |

= -18

8p + 16p +2p = 26p

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P | 2 | 2 | P | 2 |
| P | 4 | 4 | P | 4 |
| p | 4 | 1 | p | 4 |

= -18  
  
 4p + 8p + 8p = 20p

20p -26p = -18

-6p = -18

P =

P = 3

|  |  |  |
| --- | --- | --- |
| P | -1 | 2 |
| P | -2 | 4 |
| P | -3 | 1 |

-12 -24 -3 = -39

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | -1 | 2 | 3 | -1 |
| 3 | -2 | 4 | 3 | -2 |
| 3 | -3 | 1 | 3 | -3 |

-6 -12 -12 = -30

Determinante = -30 - (-39) = 9

Resposta correta: E) 9

2. (MACK)

|  |  |  |  |
| --- | --- | --- | --- |
| A11 | A12 | A13 | A14 |
| A21 | A22 | A23 | A24 |
| A31 | A32 | A33 | A34 |
| A41 | A42 | A43 | A44 |

= -6

Det B = Kn \* det A

Det (2A) = x – 97

X – 97 = 24 \* (-6)

X – 97 = 16 \* (-6)

X – 97 = -96

X = 97 – 96

X = 1

Resposta correta: C) 1

3.(CESGRANRIO)

Det B = K \* det A

Det B =

Det B =

Det =

|  |  |
| --- | --- |
| A11 | A12 |

Resposta correta: C)

4. (UESP)

0 + 4k – 2k = 2k

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2 | 1 | 0 | 2 | 1 |
| k | k | k | k | k |
| 1 | 2 | -2 | 1 | 2 |

= 10  
 -4k + k + 0 =- 3k

- 3k -2k = 10

-5k = 10

K = = -2

K = -2

|  |  |  |
| --- | --- | --- |
| 2 | 1 | 0 |
| -2 + 4 | -2 + 3 | -2 -1 |
| 1 | 2 | 3 |

0 -12 -4 = -16

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2 | 1 | 0 | 2 | 1 |
| 2 | 1 | -3 | 2 | 1 |
| 1 | 2 | -2 | 1 | 2 |

-4 -3 + 0 = -7

Det =-7 – (-16) = 9

Resposta correta: C) 9

5.

Resposta Correta: D) uma fila como combinação linear das outras duas filas paralelas

6.

2x2 + 12 + 9 x

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | x | X2 | 1 | X |
| 1 | 2 | 4 | 1 | 2 |
| 1 | -3 | 9 | 1 | -3 |

= 0

18 + 4x + -3x2

18 + 4x -3x2 – 2x2 + 12 + 9x = 0

-5x2 – 5x + 30 = 0 )

X2  + x -6 = 0

= b2 – 4 \* a \* c

12  + 4 \* 1 \* -6

∆ = 1 + 24

∆ = 25

X =

X =

X1 =

X2 =

Resposta correta: V = {-3,2}

7. (F.M.Santos – SP)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | 0 | 0 | 0 | 0 |
| 2 | 2 | 0 | 0 | 0 |
| 3 | 2 | 1 | 0 | 0 |
| 4 | 2 | 3 | -2 | 0 |
| 5 | 1 | 2 | 3 | 3 |

Determinante = 1 \* 2 \* 1 \* -2 \* 3 = 12

Resposta correta: D) 12