01 (15 min)

$$\begin{matrix} 3 & -3 & 1 & -9 \\ 1 & 1 & -1 & 1 \\ 3 & -5 & 1 & 7 \end{matrix} \xrightarrow{L_1 \rightleftarrows L_2} \begin{matrix} 1 & 1 & -1 & 1 \\ 3 & -3 & 1 & -9 \\ 3 & -5 & 1 & 7 \end{matrix} \xrightarrow{L_2 = L_2 - 3L_1} \begin{matrix} 1 & 1 & -1 & 1 \\ 0 & -6 & 4 & -12 \\ 3 & -5 & 1 & 7 \end{matrix} \xrightarrow{L_3 = L_3 - 3L_1} \begin{matrix} 1 & 1 & -1 & 1 \\ 0 & -6 & 4 & -12 \\ 0 & -8 & 4 & 4 \end{matrix} \xrightarrow{L_3 = L_3 - \frac{8}{6}L_2}$$

$0 \quad (-8 - \frac{8}{6}(-6)) \quad (4 - \frac{8}{6}(4)) \quad (4 - \frac{8}{6}(-12))$

$0 \quad 0 \quad -\frac{16}{3} \quad 20$

$\frac{24}{6} - \frac{4 \cdot 8}{6} = -\frac{32}{6} = -\frac{16}{3}$ $\quad 4 + \frac{^2 12 \cdot 8}{6} = 20$

$-\frac{16}{3} z = 20$

$z = \frac{20 \cdot 3}{16}$

02 $\begin{bmatrix} 4-\lambda & 1 \\ 0 & 2-\lambda \end{bmatrix} = (4-\lambda)(2-\lambda) - 0 = 0$

$\lambda = 4 \text{ e } 2$ //

03 (conferir) PROJEÇÃO ORTOGONAL

$\begin{vmatrix} i & j & k & i & j \\ 3 & 4 & 0 & 3 & 4 \\ 1 & 0 & 0 & 1 & 0 \end{vmatrix}$

$4k$ //

04 (228) ORDEM IMPORTA:

$1x + 2y = 8$

$y = \frac{8-x}{2}$

x	y
0	4
1	x
2	3
3	x
4	2
6	1
8	0

0,4 – 1; 2,3 – AAB00 → $\frac{5!}{2!\,3!}$ $\frac{5 \cdot 4}{2} = 10$ /

4,2 – $\frac{6!}{4!\,2!}$ $\frac{6 \cdot 5}{2} = 15$ / $25 + 9 = 34$ //

6,1 – $\frac{7!}{6!\,1!} = 7$ /

8,0 – 1 /

$-\frac{16}{3}z = 20 \Rightarrow z = \frac{20 \cdot 3}{16} = \frac{15}{4}$

05 (328 / 317)

$\frac{4}{9}$ $\quad 9^T \to 3$ ABC

A – – – C^6_3 $\quad \frac{6!}{3!\,3!} = \frac{6 \cdot 5 \cdot 4}{3 \cdot 2} = 12 \cdot 3$ $\quad 36.$

B – – – C^6_3 $\quad 18$

C – – – C^6_3 $\quad 54$ //

X – – – C^6_4 $\quad \frac{6 \cdot 5 \cdot 4!}{4!\,2!} = 15$

06 (317 / 306)

3A 4B

AAX

AB BA

1º A BA B → $x^2 y^2$ $\frac{4!}{2!\,2!} = \frac{4 \cdot 3}{2} = 6$ /

2º B AB B → $x^3 y = \frac{4!}{3!\,1!} = 4$ // $\quad 4 + 6 = 10$ //

08 (0302 / 257)

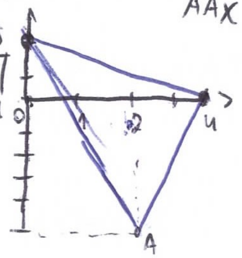
$\int_0^2 x^2 dx = \left| \frac{x^3}{3} \right|_0^2 = \frac{8}{3} - \frac{0}{3} = \frac{7}{3}$

$\frac{d}{dx}\left(\frac{x^3}{3}\right) = 3\frac{x^2}{3}$

3 ?

09 (282 / 256) $\frac{\partial}{\partial x}(2xy)$ $\quad \frac{\partial}{\partial y}(x^2 + 6y)$ //

10 (255 / 251)



(2, -1)

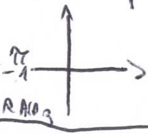
a ? //

11 (251 / 247)

1 ACHAR FUNÇÃO DA RETA
2 ACHAR x e y QUANDO z = 0

$\begin{cases} x = 1 - 3t \\ y = 4 - 2t \\ z = 3 - 3t \end{cases}$ $\quad 3t = 3 - z^0$, $t = 1$, $x = -2$, $y = 2$ //

12 (246 / 245)



15 (242 / 241) $f(4) = 4 \cdot f(3) = 4 \cdot 3 \cdot f(2) = 4 \cdot 3 \cdot 2 \cdot f(1) = 4 \cdot 3 \cdot 2 \cdot 1$

27 (222 / 220) 32.200

(32 h · 200 hM)/...

6.400 //

30 (215 / 210)

$A\bar{C} + A\bar{B}C + \overline{A(B+C)} \to \bar{A} * (\bar{B}\bar{C}) = \bar{A}(\bar{B}\bar{C})$

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

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

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

31 (209 / 204)

	00	01	11	10
00	0	4	12	8
01	1	X	X	X
11	(13)	13	(15)	(14)
10	8	9	(11)	10

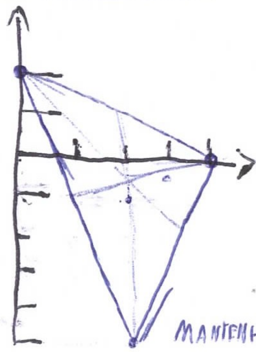
wx

$wx\bar{z}$

wyz

(S) 139

10 (13 / 08)



MANTENHO (2, -1)

05 (105)

A T T T $\quad C^3_1 \cdot C^6_3 = \frac{3!}{2!\,1!} = \frac{3 \cdot 2!}{2!}$

T T T T $\quad C^6_4 \quad \frac{6 \cdot 5 \cdot 4!}{4!\,2!} = 15$

$3 \cdot \frac{6!}{3!\,3!} = \frac{6 \cdot 5 \cdot 4 \cdot 3!}{3!\,3!} = 20$

$\frac{6 \cdot 5 \cdot 4 \cdot 3!}{3!\,3!} = \frac{6 \cdot 5 \cdot 4}{3 \cdot 2} = 20$

17 (095) $H(7,4) \to$ 4 | 3 C

0 0 0 0 0 0 0

0

0

0

01 (108 / 058)

$$\begin{matrix} 3 & -3 & 1 & -9 \\ 1 & 1 & -1 & 1 \\ 3 & -5 & 1 & 7 \end{matrix} \xrightarrow[L_2 = L_2 - \frac{1}{3}L_1]{L_3 = L_3 - L_1} \begin{matrix} 3 & -3 & 1 & -9 \\ 0 & 2 & (-1-\frac{1}{3}) & 4 \\ 0 & -2 & 0 & 16 \end{matrix} \longrightarrow \begin{matrix} 0 & 2 & -\frac{4}{3} & 4 \\ 0 & -2 & 0 & 16 \end{matrix} \xrightarrow{L_3 = L_3 + L_2} 0 \quad 0 \quad -\frac{4}{3} \quad 20$$

$z = 20 \cdot \frac{3}{4} = 15$ //