

1 - a)

$$A = \begin{vmatrix} 1 & a & 0 \\ 0 & 1 & 1 \\ 0 & -1 & 1 \end{vmatrix} \Rightarrow 2 //$$

$$1 - (-1)$$

$$2 //$$

b)

$$B = \begin{vmatrix} 1 & 0 & 0 & 3 \\ a & 1 & -1 & 4 \\ 0 & 0 & 0 & 3 \\ 0 & 1 & 1 & 4 \end{vmatrix} \Rightarrow 3 \times 2 = 6 \text{ porém...}$$

(ass) então

$$-6 //$$

3 (col)

$$\begin{vmatrix} 1 & 0 & 0 \\ a & 1 & -1 \\ 0 & 1 & 1 \end{vmatrix}$$

$$1 - (-1)$$

$$2 //$$

2 -

$$\begin{vmatrix} x^2 & 0 & x & -\frac{1}{10} \\ 7,5 & 0 & 5 & 2 \\ 10 & 0 & 4 & 2 \\ 1 & 1 & 1 & 1 \end{vmatrix}$$

$$\Rightarrow x = -2 \text{ ou}$$

$$x = -\frac{1}{2} //$$

$$\Delta = 9 //$$

$$\left. \begin{array}{l} 25 - 16 \\ -5 \pm 3 \\ 4 \end{array} \right\} \begin{array}{l} -2 \\ -\frac{1}{2} \end{array}$$

$$\begin{vmatrix} x^2 & x & -\frac{1}{10} \\ 7,5 & 5 & 2 \\ 10 & 4 & 2 \end{vmatrix}$$

$$(10x^2 + 20x - 3) - (-5 + 15x + 8x^2)$$

$$10x^2 + 20x - 3 + 5 - 15x - 8x^2$$

$$2x^2 + 5x + 2$$

FORONI

3.

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

$$\Rightarrow -2x^3 + x^2 + 3 //$$

LETRA (A) //

-1 (coef)

$$\begin{vmatrix} x & 0 & 3 \\ -1 & x & 0 \\ 0 & -1 & 1 \end{vmatrix}$$

$$x^2 + 3$$

-2 (coef)

$$\begin{vmatrix} x & 0 & 0 \\ -1 & x & 0 \\ 0 & -1 & x \end{vmatrix}$$

$$x^3 \Rightarrow -2x^3$$

4.

$$A = \begin{vmatrix} x & 1 & 0 & 0 & 0 \\ 0 & x & 1 & 0 & 0 \\ 0 & 0 & x & 1 & 0 \\ 0 & 0 & 0 & x & k \\ 0 & 0 & 0 & 1 & x \end{vmatrix}$$

$$\Rightarrow 5 //$$

LETRA (D)

\Rightarrow

$$x \ 1 \ 0 \ 0$$

$$0 \ x \ 1 \ 0$$

$$0 \ 0 \ x \ k$$

$$0 \ 0 \ 1 \ x$$

$$\Delta = x \cdot x \cdot x^3 + kx$$

$$x^5 + kx$$

\Rightarrow

$$\begin{vmatrix} x & 1 & 0 \\ 0 & x & k \\ 0 & 1 & x \end{vmatrix}$$

$$f(-2) = 8$$

$$8 = (-2)^3 \cdot [(-2)^4 - k]$$

$$k = 5 //$$

$$x^3 + kx$$