VGA

Determinantes

Determinantes

$$M = \begin{bmatrix} 2 & 0 \\ -3 & 1 \end{bmatrix} \qquad D = \begin{vmatrix} 2 & 0 \\ -3 & 1 \end{vmatrix} = 2 - 0 = 2$$

0 (II) $\qquad 2$ (I)

$$A = \begin{bmatrix} 1 & 3 \\ -2 & 1 \end{bmatrix} \qquad D = \begin{vmatrix} 1 & 3 \\ -2 & 1 \end{vmatrix} = 1 - (-6) = 1 + 6 = 7$$

$-6 \qquad 1$

$$B = \begin{bmatrix} 1 & 0 & 2 \\ -1 & 3 & 0 \\ 2 & 1 & -2 \end{bmatrix} \qquad D = \begin{vmatrix} 1 & 0 & 2 & 1 & 0 \\ -1 & 3 & 0 & -1 & 3 \\ 2 & 1 & -2 & 2 & 1 \end{vmatrix} = -8 - 12 = -20$$

$12 \quad 0 \quad 0 \qquad -6 \quad 0 \quad -2$

12 (II) $\qquad -8$ (I)

$$C = \begin{bmatrix} 1 & 0 & -1 \\ 3 & 2 & 0 \\ -2 & 3 & 1 \end{bmatrix} \qquad D = \begin{vmatrix} 1 & 0 & -1 & 1 & 0 \\ 3 & 2 & 0 & 3 & 2 \\ -2 & 3 & 1 & -2 & 3 \end{vmatrix} = -7 - 4 = -11$$

$4 \quad 0 \quad 0 \qquad 2 \quad 0 \quad -9$

$4 \qquad -7$

EXERCÍCIOS

13.1. Calcule os determinantes:

a) $\begin{vmatrix} 2 & 3 \\ -1 & 2 \end{vmatrix}$ b) $\begin{vmatrix} 0 & -1 \\ 2 & 7 \end{vmatrix}$ c) $\begin{vmatrix} 6 & 1 \\ -1 & 0 \end{vmatrix}$

13.2. Calcule os determinantes:

a) $\begin{vmatrix} 2 & 3 & 0 \\ -1 & 2 & 0 \\ 0 & 1 & -1 \end{vmatrix}$ b) $\begin{vmatrix} 0 & -1 & 3 \\ 2 & 2 & 0 \\ 3 & 0 & 1 \end{vmatrix}$ c) $\begin{vmatrix} 6 & 1 & 2 \\ -1 & 0 & 0 \\ 2 & 0 & 1 \end{vmatrix}$