

ATIVIDADE DE AULA - 2º ANO - DETERMINANTES - PARTE 01**01.** Calcule os determinantes.

A) $\begin{vmatrix} 3 & 4 \\ 1 & -2 \end{vmatrix}$

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

B) $\begin{vmatrix} 1 & -1 \\ 2 & 2 \end{vmatrix}$

D) $\begin{vmatrix} a & -a \\ -a & a \end{vmatrix}$

02. Calcule x nas igualdades.

A) $\begin{vmatrix} x & 2 \\ -3 & 2 \end{vmatrix} = 10$

C) $\begin{vmatrix} x & -8 \\ -3 & 5x \end{vmatrix} = 21$

B) $\begin{vmatrix} 2x & -4 \\ -3 & 2 \end{vmatrix} = 8x$

D) $\begin{vmatrix} x^2 & 8 \\ -2 & -x \end{vmatrix} = -11$

03. Calcule os determinantes.

A) $\begin{vmatrix} 3 & 4 & 0 \\ -2 & 0 & 2 \\ 1 & -2 & 1 \end{vmatrix}$

C) $\begin{vmatrix} 1 & -1 & 2 \\ 5 & 7 & -4 \\ 1 & 0 & 1 \end{vmatrix}$

B) $\begin{vmatrix} 0 & 1 & 3 \\ -3 & 0 & 1 \\ 4 & 2 & 5 \end{vmatrix}$

D) $\begin{vmatrix} 1 & 0 & 4 \\ 0 & 2 & 1 \\ 0 & 0 & -6 \end{vmatrix}$

04. Resolva em \mathbb{R} as equações:

A) $\begin{vmatrix} 0 & 2 & 1 \\ -4 & -1 & x \\ 2 & -1 & 1 \end{vmatrix} = 10$

B) $\begin{vmatrix} 4 & x+1 & 1 \\ 3 & -1 & 0 \\ 2 & -1 & 1 \end{vmatrix} = x$

C) $\begin{vmatrix} 1 & 3 & y-2 \\ 3 & 2 & 0 \\ y & 0 & 0 \end{vmatrix} = \begin{vmatrix} 5 & y \\ y-3 & -4 \end{vmatrix}$

D) $\begin{vmatrix} 3 & x & 1 \\ 5 & 1 & x \\ 2 & 5 & 0 \end{vmatrix} = 1$

05. Resolva em \mathbb{R} as Inequações:

A) $\begin{vmatrix} x & 0 & 2 \\ 1 & 0 & x \\ x & 1 & x+1 \end{vmatrix} \geq -2$

C) $\begin{vmatrix} x & 0 & 2 \\ 2 & 0 & 3 \\ 0 & x & 1 \end{vmatrix} > -7$

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

D) $\begin{vmatrix} 1 & 2 & x \\ -1 & x & x+1 \\ 3 & 2 & x \end{vmatrix} < 6$

ATIVIDADE - PARTE 02 - PARA CASA**01.** Calcule os determinantes.

A) $\begin{vmatrix} m & -m \\ -m & -m \end{vmatrix}$

B) $\begin{vmatrix} 5 & -1 \\ -1 & -3 \end{vmatrix}$

C) $\begin{vmatrix} 5 & 6 \\ -1 & -2 \end{vmatrix}$

D) $\begin{vmatrix} 3 & -2 & 1 \\ 7 & -4 & 5 \\ 1 & 0 & 0 \end{vmatrix}$

E) $\begin{vmatrix} 0 & 1 & 3 \\ -4 & 2 & 5 \\ -3 & 0 & -1 \end{vmatrix}$

F) $\begin{vmatrix} 1 & 2 & 4 \\ 0 & 3 & 9 \\ 0 & 0 & -5 \end{vmatrix}$

02. Obtenha x nas igualdades.

A) $\begin{vmatrix} x & 4 \\ x+2 & 3 \end{vmatrix} = x$

B) $\begin{vmatrix} x & x+2 \\ -3 & x-2 \end{vmatrix} = \begin{vmatrix} x & 7 \\ -x & 1 \end{vmatrix}$

C) $\begin{vmatrix} 1 & -1 & 2 \\ 2 & x-4 & x-1 \\ 2 & -3 & x-3 \end{vmatrix} = 9$

D) $\begin{vmatrix} 5 & 1 & x \\ 2 & 0 & x+1 \\ 2x & -2 & 5 \end{vmatrix} = \begin{vmatrix} 5 & x-1 \\ -1 & 8 \end{vmatrix}$

03. Resolva em \mathbb{R} as inequações.

A) $\begin{vmatrix} 1 & 0 & 1 \\ 2x & x & x \\ 3 & 2x & x \end{vmatrix} < 0$

B) $\begin{vmatrix} 6 & -x & -5 \\ x & 0 & -x \\ 1 & -3 & 2 \end{vmatrix} \geq \begin{vmatrix} -x & 2 & x \\ 0 & x & 4 \\ 0 & 0 & -6 \end{vmatrix}$

04. Sejam as matrizes $A = (a_{ij})_{2 \times 2}$ tal que $a_{ij} = i + j$ e $B = (b_{ij})_{2 \times 2}$ tal que $b_{ij} = i^2 - j$. Calcule:

A) $\det A + \det A^t$

C) $\det A \cdot \det B$

B) $\det B + \det B^t$

D) $\det (A \cdot B)$