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MGF / Scalar multiplication of a matrix

Worked Examples:

Scalar multiplication of a matrix

Let $D = \begin{bmatrix} -3 & 6 \\ 5 & -4 \\ -5 & -1 \end{bmatrix}$. Find $-3D$.

3×2 Matrix

$$-3D = -3 \begin{bmatrix} -3 & 6 \\ 5 & -4 \\ -5 & -1 \end{bmatrix} = \begin{bmatrix} 9 & -18 \\ -15 & 12 \\ 15 & 3 \end{bmatrix}$$

Multiply everything in Matrix by -3

Scalar multiplication of a matrix

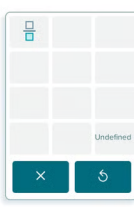
Let $C = \begin{bmatrix} 3 & 1 \\ -5 & 2 \\ -6 & -3 \end{bmatrix}$. Find $-2C$.

3×2

rows $\times$ columns

$-2C =$

$-2C$



$$\begin{bmatrix} 3 & 1 \\ -5 & 2 \\ -6 & -3 \end{bmatrix} \begin{matrix} \times 2 \\ \times 2 \\ \times 2 \end{matrix} = \begin{bmatrix} -6 & -2 \\ 10 & -4 \\ 12 & 6 \end{bmatrix}$$

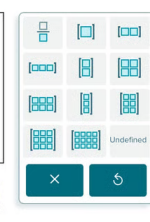
Scalar multiplication of a matrix

Let $C = \begin{bmatrix} -6 & 5 \\ 2 & -4 \end{bmatrix}$. Find $5C$.

Matrix

rows $\times$ columns

$5C =$



2×2

$$\begin{bmatrix} -6 & 5 \\ 2 & -4 \end{bmatrix} \begin{matrix} \times 5 \\ \times 5 \end{matrix} = \begin{bmatrix} -30 & 25 \\ 10 & -20 \end{bmatrix}$$

take every

#GraphsFunctionsAndSystems

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