

Matrix

a rectangular arrangement of **numbers** enclosed in **brackets**.

$$\begin{bmatrix} 4 & 2 & -3 \\ -3 & 1 & 6 \\ 5 & 4 & -3 \end{bmatrix} \quad \begin{bmatrix} 4 & 5 \\ 1 & 6 \end{bmatrix} \quad \begin{bmatrix} 9 & 2 & -3 \\ -3 & 1 & 0 \end{bmatrix} \quad \begin{bmatrix} 4 & 2 \\ -3 & 1 \\ 6 & 8 \end{bmatrix}$$

The **individual values** within a **matrix** are called **entries**.

Scalar Multiplication

To multiply a **scalar** through a **matrix**, multiply each **entry** by the **scalar**.

Scalar · **Matrix**

$$5 \begin{bmatrix} 3 & 5 \\ 2 & -4 \end{bmatrix}$$

The **individual values** within a **matrix** are called **entries**.

$$A = \begin{bmatrix} 4 & 2 \\ -3 & 1 \end{bmatrix}$$

$$B = \begin{bmatrix} -2 \\ 4 \end{bmatrix}$$

$$C = \begin{bmatrix} 4 & -2 & -8 \end{bmatrix}$$

$$D = \begin{bmatrix} 1 & 0 & 8 \\ -1 & 7 & 9 \end{bmatrix}$$

Evaluate the following

$$2A$$

$$-4B$$

$$A = \begin{bmatrix} 4 & 2 \\ -3 & 1 \end{bmatrix}$$

$$B = \begin{bmatrix} -2 \\ 4 \end{bmatrix}$$

$$C = \begin{bmatrix} 4 & -2 & -8 \end{bmatrix}$$

$$D = \begin{bmatrix} 1 & 0 & 8 \\ -1 & 7 & 9 \end{bmatrix}$$

Evaluate the following

$$\frac{1}{2}C$$

$$-1D$$

Scalar Multiplication

To multiply a **scalar** through a **matrix**, multiply each **entry** by the **scalar**.

Scalar · Matrix

$$5 \begin{bmatrix} 3 & 5 \\ 2 & -4 \end{bmatrix} = \begin{bmatrix} 15 & 25 \\ 10 & -20 \end{bmatrix}$$