

♥ Matrices ♥ (With thanks to Khan Academy)

① $A = \begin{bmatrix} -2 & 5 & 6 \\ 3 & 2 & 7 \end{bmatrix}$ A is a $\square \times \square$ matrix

dimensions

② Transpose

What is A^T ?

$$A^T =$$

③ Matrix addition

$$B = \begin{bmatrix} -10 & 12 \\ -6 & 3 \end{bmatrix} \quad C = \begin{bmatrix} -1 & 4 \\ 22 & 7 \end{bmatrix}$$

$$B + C =$$

④ Scalar multiplication

$$D = \begin{bmatrix} -4 & -2 \\ 7 & 1 \end{bmatrix}$$

$$-3D =$$

⑤ Matrix multiplication

a) $E = \begin{bmatrix} 4 & 1 \\ 2 & 3 \end{bmatrix} \quad F = \begin{bmatrix} 2 & 8 \\ 5 & 4 \end{bmatrix}$

$$EF =$$

b) $G = \begin{bmatrix} 4 & 1 \\ 2 & 3 \end{bmatrix} \quad H = \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix}$

Is GH defined?

c) $I = \begin{bmatrix} 2 & 4 & 1 \\ 2 & 2 & 3 \end{bmatrix} \quad J = \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix}$

Is IJ defined?