

Week 1

Quiz 3

Ques1. $A = \begin{bmatrix} 1 & -4 \\ -2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 0 & 3 \\ 5 & 8 \end{bmatrix}$, $A + B = ?$

Answer: $\begin{bmatrix} 1 & -1 \\ 3 & 9 \end{bmatrix}$

Ques2. Let $x = \begin{bmatrix} 5 \\ 5 \\ 2 \\ 7 \end{bmatrix}$, $2 * x = ?$

Answer: $\begin{bmatrix} 10 \\ 10 \\ 4 \\ 14 \end{bmatrix}$

Ques3. Let u be a 3-dimensional vector, where specifically $u = \begin{bmatrix} 8 \\ 1 \\ 4 \end{bmatrix}$. What is the transpose of u ?

Answer: $\begin{bmatrix} 8 & 1 & 4 \end{bmatrix}$

Ques4. Let u and v be 3-dimensional vectors, where specifically $u = \begin{bmatrix} 4 \\ -4 \\ -3 \end{bmatrix}$, $v = \begin{bmatrix} 4 \\ 2 \\ 4 \end{bmatrix}$. What is the result of the transpose of u times v ?

Answer: -4

Ques5. Let A and B be 3x3 (square) matrices. Which of the following must necessarily hold true? Check all that apply.

Answer: $A+B=B+A$; If A is the 3x3 identity matrix, then $A * B = B * A$
 $A*B=B*A$