Linear Algebra: Homework 1

Due on February 26, 2018 at 8:30am

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$$x_1 \begin{pmatrix} u_1 \\ u_2 \\ u_3 \end{pmatrix} + x_2 \begin{pmatrix} v_1 \\ v_2 \\ v_3 \end{pmatrix} + x_3 \begin{pmatrix} w_1 \\ w_2 \\ w_3 \end{pmatrix} = \begin{pmatrix} i_1 \\ i_2 \\ i_3 \end{pmatrix}$$

$$A : \begin{bmatrix} 1 & 2 & 3 \\ 0 & -1 & 7 \end{bmatrix}, B : \begin{bmatrix} 3 & 4 & 2 \\ -1 & 1 & 0 \end{bmatrix}$$

$$A + B = C$$

$$\begin{bmatrix} 1 & 2 & 3 \\ 0 & -1 & 7 \end{bmatrix} + \begin{bmatrix} 4 & 2 \\ 1 & 0 \\ 3 & -1 \end{bmatrix} = undefined$$

$$\alpha = -2, A : \begin{bmatrix} 1 & 2 & 3 \\ 0 & -1 & 7 \end{bmatrix}, \alpha A = \begin{bmatrix} -2 & -4 & -6 \\ 0 & 2 & -14 \end{bmatrix}$$

$$A : \begin{bmatrix} 3 & 2 & 1 \end{bmatrix} \times B : \begin{bmatrix} 1 & 2 \\ 8 & 4 \\ 5 & 7 \end{bmatrix} = C : \begin{bmatrix} 24 & 21 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 3 & 5 \\ 0 & 1 & 7 \end{bmatrix} \times \begin{bmatrix} 3 & 8 \\ 2 & 4 \end{bmatrix} = undefined$$

$$I : \begin{bmatrix} 1 & 1 & 1 & 1 \\ 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$