

EE3900-Assignment 2

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Download all latex-tikz codes from

<https://github.com/vaishnavi-w/EE3900/blob/main/Assignment2/latex2.tex>

and python codes from

<https://github.com/vaishnavi-w/EE3900/blob/main/Assignment2/codes/code2.tex>

1 MATRICES 2.8

If $A = \begin{pmatrix} 2 & 1 & 5 \\ 3 & 2 & 4 \\ 1 & 3 & 2 \\ 7 & 2 & 3 \end{pmatrix}$ and $B = \begin{pmatrix} 2 & 3 & 1 \\ 5 & 2 & 4 \\ 1 & 5 & 2 \\ 5 & 5 & 5 \end{pmatrix}$, then compute $3A - 5B$

2 SOLUTION

$$3A = 3 \begin{pmatrix} 2 & 1 & 5 \\ 3 & 2 & 4 \\ 1 & 3 & 2 \\ 7 & 2 & 3 \end{pmatrix} = \begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 4 \\ 7 & 6 & 2 \end{pmatrix} \quad (2.0.1)$$

$$5B = 5 \begin{pmatrix} 2 & 3 & 1 \\ 5 & 2 & 4 \\ 1 & 5 & 2 \\ 5 & 5 & 5 \end{pmatrix} = \begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 4 \\ 7 & 6 & 2 \end{pmatrix} \quad (2.0.2)$$

$$3A - 5B = \begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 4 \\ 7 & 6 & 2 \end{pmatrix} - \begin{pmatrix} 2 & 3 & 5 \\ 1 & 2 & 4 \\ 7 & 6 & 2 \end{pmatrix} \quad (2.0.3)$$

$$\Rightarrow 3A - 5B = \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix} \quad (2.0.4)$$