

Solutions to Attendance Quiz for Lecture 1

1. Compute $2A + 3B$ if

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

Sol. of 1:

$$\begin{aligned} 2A + 3B &= 2 \begin{bmatrix} 2 & -3 & 1 \\ -4 & 5 & 0 \\ 3 & -1 & 2 \end{bmatrix} + 3 \begin{bmatrix} 3 & -2 & 3 \\ 1 & 2 & 3 \\ 5 & 2 & 3 \end{bmatrix} \\ &= \begin{bmatrix} 4 & -6 & 2 \\ -8 & 10 & 0 \\ 6 & -2 & 4 \end{bmatrix} + \begin{bmatrix} 9 & -6 & 9 \\ 3 & 6 & 9 \\ 15 & 6 & 9 \end{bmatrix} \\ &= \begin{bmatrix} 4+9 & -6-6 & 2+9 \\ -8+3 & 10+6 & 0+9 \\ 6+15 & -2+6 & 4+9 \end{bmatrix} \\ &= \begin{bmatrix} 13 & -12 & 11 \\ -5 & 16 & 9 \\ 21 & 4 & 13 \end{bmatrix} \quad . \end{aligned}$$

Ans. to 1:

$$2A + 3B = \begin{bmatrix} 13 & -12 & 11 \\ -5 & 16 & 9 \\ 21 & 4 & 13 \end{bmatrix} \quad .$$

Comment: Everyone, except one person, who made a calculation error, got it right!