

Chapter 2: Exercise Set

Exercise 2.1

Consider the following matrices:

$$\mathbf{A} = \begin{bmatrix} 1 & 3 & 5 \\ 2 & 4 & 6 \\ 0 & 8 & 2 \end{bmatrix} \quad (1)$$

$$\mathbf{B} = \begin{bmatrix} 7 & 2 \\ 1 & 5 \\ 9 & 4 \end{bmatrix} \quad (2)$$

Find the following properties.

- (a) $A_{2,3}$
- (b) \mathbf{A}^T
- (c) \mathbf{B}^T
- (d) $\mathbf{A} + \mathbf{A}$
- (e) $2\mathbf{B} + 1$
- (f) $\mathbf{A}\mathbf{A}$
- (g) $\mathbf{A}\mathbf{B}$
- (h) $\mathbf{A} \odot \mathbf{A}$
- (i) $I_3\mathbf{B}$
- (j) $\mathbf{B}I_2$