Assignment 01: Rolling In the Mud

1. Create the following matrices:

$$\boldsymbol{u} = \begin{bmatrix} 11 & 13 & 17 \end{bmatrix} \tag{1}$$

$$\boldsymbol{v} = \begin{bmatrix} -1 \\ -1 \\ -1 \end{bmatrix} \tag{2}$$

$$\boldsymbol{A} = \begin{bmatrix} \boldsymbol{u} \\ 2\boldsymbol{u} \\ 7\boldsymbol{u} \end{bmatrix} \tag{3}$$

$$\boldsymbol{B} = \begin{bmatrix} \boldsymbol{A} & \boldsymbol{v} \end{bmatrix} \tag{4}$$

2. Perform the following calculations:

$$c = e^{j\pi/4} \tag{5}$$

$$d = \sqrt{j} \tag{6}$$

$$l = \left\lfloor \sqrt[2.1]{8.4108 \times 10^6} \right\rfloor \tag{7}$$

$$k = \lfloor 100 \log(2) \rfloor + \left\lceil e^{7.5858} \right\rceil \tag{8}$$