Assignment 01: Welcome to MATLAB!

1. Create and display the following matrices:

(1) $u = [17 \;\; 30 \;\; 8]$

(2) $v = \begin{bmatrix} 9 \\ 15 \\ 12 \end{bmatrix}$

(3) $A = \begin{bmatrix} -3u \\ -2u \\ -u \\ u \\ 2u \end{bmatrix}$

(4) $B = [A^T \; v]$

2. Perform the following calculations:

(1) $c = e^{j\pi/3}$

(2) $d = \sqrt{j}$

(3) $m = \sqrt[4.3]{20000}$

(4) $n = \lfloor 2^{7.5} \rfloor + \lceil 25log(250) \rceil$

3. Use left matrix division to find a solution x to $Ax = b$ where

$$A = \begin{bmatrix} 8 & 1 & 12 \\ -7 & -2 & -11 \\ 1 & -4 & 0 \end{bmatrix} \text{ and } b = \begin{bmatrix} 109 \\ -84 \\ 56 \end{bmatrix}.$$