App.1

Try to write the following matrices in less than 1 minute and using a less number of commands in MATLAB

$$F = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 51 \\ 0 & 0 & 0 & 0 & 41 & 0 \\ 0 & 0 & 0 & 31 & 0 & 0 \\ 0 & 0 & 21 & 0 & 0 & 0 \\ 0 & 11 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}; \quad (1)$$

$$C = \begin{bmatrix} 0 & 0 & 8 & 0 & 0 \\ 0 & 0 & 7 & 0 & 0 \\ 0 & 0 & 6 & 0 & 0 \\ 0 & 0 & 5 & 0 & 0 \\ 0 & 0 & 4 & 0 & 0 \end{bmatrix}; \quad (2)$$

$$N = \begin{bmatrix} 0 & 0 & 0 & 66 \\ 66 & 0 & 0 & 0 \\ 66 & 0 & 0 & 0 \\ 0 & 0 & 0 & 66 \end{bmatrix}; \quad (3)$$

App.2

$a=\begin{pmatrix}8 & 1 & 6\\ 3 & 5 & 7\\ 4 & 9 & 2\end{pmatrix}$	(4)

1.What will be display or the result if the following commands are written by MATLAB

a([1 3],[1 3]) = [99 88 ; 77 66]	(5)

a([2 3],[2 3])	(6)

2.Discover the changes and provide the command that allow these changes in the matrix

$a=\begin{pmatrix}8 & 1 & 6\\ 3 & 5 & 7\\ 4 & 9 & 2\end{pmatrix}\Rightarrow a=\begin{pmatrix}77 & 8 & 1 & 6\\ 77 & 3 & 5 & 7\\ 77 & 4 & 9 & 2\end{pmatrix}$	(7)

$a=\begin{pmatrix}8 & 1 & 6\\ 3 & 5 & 7\\ 4 & 9 & 2\end{pmatrix}\Rightarrow a=\begin{pmatrix}8 & 1 & 6 & 1\\ 3 & 5 & 7 & 1\\ 4 & 9 & 2 & 1\end{pmatrix}$	(8)

a = [-6*ones(1,3) ; a]	(9)

a = [a ; -6*zeros(1,3)]	(10)

a = [a ; a]	(11)


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