18/ENG05/028
Mechatronics Engineering

using MATLAB online
Command window

```
clc
clear
close all
A = [1 4 7; 2 5 8; 3 6 9]
B = [10 13 16; 11 14 17; 12 15 18]
x = [A; B]
Y = transpose(x)
```

using MATHCAD

$$A := \begin{pmatrix} 1 & 4 & 7 \\ 2 & 5 & 8 \\ 3 & 6 & 9 \end{pmatrix}$$

$$B := \begin{pmatrix} 10 & 13 & 16 \\ 11 & 14 & 17 \\ 12 & 15 & 18 \end{pmatrix}$$

$$Y = \text{augment}(A, B) = \begin{bmatrix} 1 & 4 & 7 & 10 & 13 & 16 \\ 2 & 5 & 8 & 11 & 14 & 17 \\ 3 & 6 & 9 & 12 & 15 & 18 \end{bmatrix}$$

$$X = (\text{augment}(A, B)^T) = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \\ 10 & 11 & 12 \\ 13 & 14 & 15 \\ 16 & 17 & 18 \end{bmatrix}$$