



7. Suppose the following matrix has been defined in Matlab®:

$$A = \begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & -1 & 0 \\ 0 & 0 & 1 & 1 \end{bmatrix}$$

a) What is result of the following Matlab® command?

`A * A'`

```
ans =  
     2     -1     1  
    -1     2    -1  
     1    -1     2
```

b) What is result of the following Matlab® command?

`all(min(2*A))`

```
ans =  
     0
```

8. Suppose the following matrices have been defined in Matlab®:

$$C = \begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix} \quad D = \begin{bmatrix} 1 & 3 \\ 1 & 4 \end{bmatrix}$$

a) What is result of the following Matlab® command:

`C - D`

```
ans =  
     0     1  
     2    -2
```

b) What is result of the following Matlab® command:

`C ~= C(D)`

```
ans =  
     0     0  
     1     0
```

c) What is result of the following Matlab® command:

`C(2, [2:-1:1])`

```
ans =  
     2     3
```

9. Given $x = [-1, -0.5, 0, 0.5, 1]$, write down a one-line Matlab® command to compute values of the following function for all values of x at once using array processing:

$$y = \frac{1 + e^{-(3+x)}}{1 + e^{-(3-x)}}$$

```
>>x = -1:0.1:1;  
>>y = (1 + exp(-(3+x)))./(1 - exp(-(3-x)))
```

10. What is result of the following Matlab® command?

```
[str2num('2.5'), [ ], 3]
```

```
ans =  
    2.5000     3
```