

a. Let $x = [1 \ 2 \ 3 \ 4]$. Write a MATLAB commands to find the followings:

i. Add 5 to each element.

ii. Compute the square root and square of each element.

i.

```
>> x=[1 2 3 4]
x =
     1     2     3     4
>> x+5
ans =
     6     7     8     9
>> |
```

ii.

```
>> sqrt(x)
ans =
     1.0000     1.4142     1.7321     2.0000
>> x
x =
     1     2     3     4
>> x.^2
ans =
     1     4     9    16
```

b. Given that arrays $x = [1 \ 2 \ 3]$, $y = [2 \ 4 \ 5]$ and $U = [2 \ 4 \ 6; 4 \ 5 \ 2]$. Write a MATLAB commands to find (i) $2x+y$ ii) $U-2$

i.

```
>> x
x =
     1     2     3

>> y
y =
     2     4     5

>> 2*x+y
ans =
     4     8    11

>> |
```

ii.

```
>> u=[2 4 5;4 5 2]
u =
     2     4     5
     4     5     2

>> u-2
ans =
     0     2     3
     2     3     0

>> |
```

e. $A = [2 \ 3 \ 5; -2 \ -3 \ -5; 4 \ 7 \ 1]$, $B = [0 \ 1 \ 3; -2 \ -3 \ -5; 2 \ 3 \ 5]$, write a Matlab code to find $(7A - 9B)$ and product of the matrices A & B .

```
>> A=[2 3 5;-2 -3 -5;4 7 1]
A =
     2     3     5
    -2    -3    -5
     4     7     1

>> B=[0 1 3;-2 -3 -5; 2 3 5]
B =
     0     1     3
    -2    -3    -5
     2     3     5

>> 7*A-9*B
ans =
    14    12     8
     4     6    10
    10    22   -38

>> A
```

```
>> A
A =
     2     3     5
    -2    -3    -5
     4     7     1

>> B
B =
     0     1     3
    -2    -3    -5
     2     3     5

>> A*B
ans =
     4     8    16
    -4    -8   -16
   -12   -14   -18
```