

2. Basic Operations

a) Define the matrices.

```
A=[ 2,2,0;0,8,3]
```

```
A = 2x3
     2     2     0
     0     8     3
```

```
b=[ 5;15]
```

```
b = 2x1
     5
    15
```

```
B=A
```

```
B = 2x3
     2     2     0
     0     8     3
```

b) Replace an element of Matrix A.

```
A(1,2)=4
```

```
A = 2x3
     2     4     0
     0     8     3
```

c) Computation

```
c=0
```

```
c = 0
```

```
for i = -4:4:4
    c=c+i*A.'*b
end
```

```
c = 3x1
    -40
   -560
   -180
```

```
c = 3x1
    -40
   -560
   -180
```

```
c = 3x1
     0
     0
     0
```

```
disp(c)
```

```
0
0
0
```

d) Comparison

```
Element_wise=A.*B % Corresponds to element wise Multiplication Out = 2x3 Matrix
```

```
Element_wise = 2x3
    4     8     0
    0    64     9
```

```
Matrix_Mult=A.'*B % Corresponds to Matrix Multiplication Out = 3x3 Matrix
```

```
Matrix_Mult = 3x3
    4     4     0
    8    72    24
    0    24     9
```