Lecture 6

```
mat = [1 :3; 44 9 2; 5:-1:3]
```

```
mat = 3×3
     1     2     3
    44     9     2
     5     4     3
```

```
max(mat)
```

```
ans = 1×3
    44     9     3
```

```
max(max(mat))
```

```
ans = 44
```

```
cumsum(mat)
```

```
ans = 3×3
     1     2     3
    45    11     5
    50    15     8
```

```
cummin(mat)
```

```
ans = 3×3
     1     2     3
     1     2     2
     1     2     2
```

```
cumprod(mat)
```

```
ans = 3×3
     1     2     3
    44    18     6
   220    72    18
```

```
mat = randi(20,2,3)
```

```
mat = 2×3
    14    15    14
    16     8     4
```

```
diff(mat)
```

```
ans = 1×3
     2    -7   -10
```

```
zeros(5)*10
```

```
ans = 5×5
     0     0     0     0     0
     0     0     0     0     0
     0     0     0     0     0
     0     0     0     0     0
     0     0     0     0     0
```

```
vec = [2:12]
```

```
vec = 1×11
     2     3     4     5     6     7     8     9    10    11    12
```

```
vec = vec - 3
```

```
vec = 1×11
    -1     0     1     2     3     4     5     6     7     8     9
```

```
mat = [1 :3; 44 9 2; 5:-1:3]
```

```
mat = 3×3
     1     2     3
    44     9     2
     5     4     3
```

```
mat/3
```

```
ans = 3×3
    0.3333    0.6667    1.0000
   14.6667    3.0000    0.6667
    1.6667    1.3333    1.0000
```

```
mat.^2
```

```
ans = 3×3
           1           4           9
        1936          81           4
          25          16           9
```

```
vec=[5 9 3 4 6 11]
```

```
vec = 1×6
     5     9     3     4     6    11
```

```
v = [0 1 0 0 1 1]
```

```
v = 1×6
     0     1     0     0     1     1
```

```
v = logical(v)
```

```
v = 1×6 logical array
   0   1   0   0   1   1
```

```
vec(v)
```

```
ans = 1×3
     9     6    11
```

```
find(vec>9)
```

```
ans = 6
```

```
find(vec<9)
```

```
ans = 1×4
     1     3     4     5
```

```
vec(vec<0) = []
```

```
vec = 1×6
     5     9     3     4     6    11
```

```
neg = find(vec<0)
```

```
neg =

  1×0 empty double row vector
```

```
vec(neg) = []
```

```
vec = 1×6
     5     9     3     4     6    11
```

```
A = [1 4;3 3]
```

```
A = 2×2
     1     4
     3     3
```

```
B = [1 2;-1 0]
```

```
B = 2×2
     1     2
    -1     0
```

```
A.*B
```

```
ans = 2×2
     1     8
    -3     0
```

```
A*B
```

```
ans = 2×2
    -3     2
     0     6
```

```
B*A
```

```
ans = 2×2
     7    10
    -1    -4
```