

```
» a = [1 2 3]
» b = [4; 5; 6]
```

Πράξεις

```
» a * b
» b * a
» a * a
» c = a .^2
» a .* c
» exp(a)
» log(ans)
» A = rand(2,3)
» B = [ 1, 2, 3 ; 4, 5, 6]
» y=[-1; 2; -3]
» C = [-1, 2 ; 3, -4]
» A+B
» A+2
» C^2
» C.^2
» C.^C
```

Δημιουργία πινάκων:

```
» diag(C)
» diag(y)
» diag(diag(C))
» y'
» triu(C)
» eye(3)
» ones(3)
» zeros(3,5)
» -eye(3)
```

Σύνθετοι πίνακες:

```
» D=[B,diag(diag(C));eye(3),ones(3,2)]
```

For loop:

```
» s=0;
» for i=1:3; s = s + y(i); end
» s

» sum(y)
```

Λογικές σχέσεις:

```
» y(1) > y(2)
» y(1) < y(2)
```

while loop:

```
» x = 1;
» while x > 0; xmin = x; x = x/2; end
» xmin
```

if:

```
» x = 7; y = 5;
» if x > y; temp = y; y = x; x = temp; end
» x
» y
```

```
» for i = 1:10
    if i < 5
        continue
    end
    disp(i)
end
```

Γραφικά:

```
» t = -4:0.01:4;
» y = sin(x);
» plot(x,y);
» title('Matlab Plot')
» grid;
```

```
» t = linspace(-4,4,11);
» y = sin(t);
» plot(t,y,'o-');
» title('Matlab Plot');
» xlabel('t');
» ylabel('sin t');
» grid;
```

Συναρτήσεις:

areac.m

```
function [A] = areac(r)
% Computes the area of a circle of radius r
% Input: r (radius of the circle)
% Output: A (area of the circle)
% Usage: Emb = areac(10);
% Written by *****, May 19, 2003
%
    A = pi*r*r;
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%% end of areac %%%%%%%%%%
```

» help areac

» e = areac(10);

» e

stat.m

```
function [mean,stdev] = stat(x)
% Υπολογίζει το μέσο όρο και την τυπική
% απόκλιση ενός διανύσματος x
    n = length(x);
    mean = sum(x)/n;
    stdev = sqrt(sum((x-mean).^2/n));
```

» x = 1:9;

» [mesos typ_apokl] = stat(x)

» y = x.^4

» semilogy(x,y)

» grid