

Matlabdemo2

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>> A=[1 2 3;4 5 6;7 8 9]
A =
     1     2     3
     4     5     6
     7     8     9

>> A(:,2)           // Plockar ut kolonn 2 ur A //
ans =
     2
     5
     8

>> A(3,:)          // Plockar ut rad 3 ur A //
ans =
     7     8     9

>> A(1:2,2:3)      // Bildar en 2/2-matris genom att
ans =              // stryka rad 3 och kolonn 1 i A //
     2     3
     5     6

>> A.'             // Bildar transponatet av A //
ans =
     1     4     7
     2     5     8
     3     6     9

>> B=[1 2;2 1]
B =
     1     2
     2     1

>> Binv=inv(B)     // Beräknar inversen av B //
Binv =
    -0.3333    0.6667
    0.6667   -0.3333

>> B*Binv
ans =
     1     0
     0     1

>> format long           // Ändrar displayen att visa 16 decimaler //
>> Binv
Binv =
-0.3333333333333333    0.6666666666666667
 0.6666666666666667  -0.3333333333333333

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>> format short
>> x=[-pi/2:0.01:pi/2]; // Diskretiserar intervallet [-2,2] //
>> plot(x,sin(x),x,cos(x)) // och ritar grafen av sin x samt cos x //
>> help meshgrid // hjälptext till kommandot meshgrid //
MESHGRID X and Y arrays for 3-D plots.
[X,Y] = MESHGRID(x,y) transforms the domain specified by vectors
x and y into arrays X and Y that can be used for the evaluation
of functions of two variables and 3-D surface plots.
The rows of the output array X are copies of the vector x and
the columns of the output array Y are copies of the vector y.

[X,Y] = MESHGRID(x) is an abbreviation for [X,Y] = MESHGRID(x,x).
[X,Y,Z] = MESHGRID(x,y,z) produces 3-D arrays that can be used to
evaluate functions of three variables and 3-D volumetric plots.

For example, to evaluate the function x*exp(-x^2-y^2) over the
range -2 < x < 2, -2 < y < 2,

[X,Y] = meshgrid(-2:.2:2, -2:.2:2);
Z = X .* exp(-X.^2 - Y.^2);
surf(X,Y,Z)

MESHGRID is like NDGRID except that the order of the first two input
and output arguments are switched (i.e., [X,Y,Z] = MESHGRID(x,y,z)
produces the same result as [Y,X,Z] = NDGRID(y,x,z)). Because of
this, MESHGRID is better suited to problems in cartesian space,
while NDGRID is better suited to N-D problems that aren't spatially
based. MESHGRID is also limited to 2-D or 3-D.

Class support for inputs X,Y,Z:
float: double, single

See also SURF, SLICE, NDGRID.

>> [X,Y]=meshgrid(-2:0.2:2,-2:0.2:2); // Producerar en funktionsyta över //
>> Z=X.*exp(-X.^2-Y.^2); // rektangeln [-2,2] x [-2,2] //
>> surf(X,Y,Z)
>> diary off

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