

**PLOTTING (2D)**

- Define  $x$  by specifying range of values for  $x$
- Define  $y = f(x)$
- Call plot command  
 $\text{plot}(x, y)$

$x = [\text{start} : \text{increment} : \text{stop}]$

$y = f(x)$

$\text{plot}(x, y)$

**PLOTTING (3D)**

- $g = f(x, y)$
- First we create a set of  $(x, y)$  points over the domain of  $f$ , using `meshgrid` command
- Then define some  $f$   $z = f(x, y)$
- `surf(x, y, z)` to plot surface

**POLAR PLOTS**

$(r, \theta)$

`polarplot(theta, rho)`

EXAMPLE  
 $\theta = 0 : 0.01 : 2 * \pi$   
 $\rho = \sin(2 * \theta) * \cos(2 * \theta)$   
`polarplot(theta, rho)`

**PARAMETRIC PLOTS**

`fplot3(xt, yt, zt)`

where  $x, y, z$  are functions of  $t$  and graph is plotted over default interval  $(-5, 5)$

symbolic  $t \rightarrow \text{syms } t$

`fplot3(xt, yt, zt, [lower-limit higher-limit])`

same as above, but with a specified range