%complex numbers

z = 5+6j

z =

5.0000 + 6.0000i

% real part of z

real(z)

ans =

5

%complex part of z

%imaginary part of z

imag(z)

ans =

6

isreal(z)

ans =

<a href="matlab:helpPopup logical" style="font-weight:bold">logical</a>

0

a = 6

a =

6

isreal(a)

ans =

<a href="matlab:helpPopup logical" style="font-weight:bold">logical</a>

1

%magnitude of a complex number

abs(z)

ans =

7.8102

%conjugate of the complex number

conj(z)

ans =

5.0000 - 6.0000i

z

z =

5.0000 + 6.0000i

%argument of z

angle(z)

ans =

0.8761

clear all

z1 = 12 + 6j;

z2 = 6 +12j;

if z1 == z2

disp('true')

else

disp('false')

end

false

if z1<=z2

disp('z1 is less')

else

disp('z2 is less')

end

z2 is less

z1+z2

ans =

18.0000 +18.0000i

z1-z2

ans =

6.0000 - 6.0000i

z1/z2

ans =

0.8000 - 0.6000i

z1\*z2

ans =

0.0000e+00 + 1.8000e+02i

z1~=z2

ans =

<a href="matlab:helpPopup logical" style="font-weight:bold">logical</a>

1

%complex plots

x = []

x =

[]

for m 1:10

for m 1:10

{Error: Invalid expression. Check for missing multiplication operator, missing or unbalanced delimiters, or other syntax error. To

construct matrices, use brackets instead of parentheses.

}

for m=1:10

x(1,m) = m+2\*mj

end

{Undefined function or variable 'mj'.

}

for m=1:10

x(1,m) = m+2\*mj

end

{Undefined function or variable 'mj'.

}

for m=1:10

x(1,m) = m+(2\*mj)

end

{Undefined function or variable 'mj'.

}

for m=1:10

x(1,m) = m+(2\*m)j

x(1,m) = m+(2\*m)j

{Error: Invalid expression. Check for missing multiplication operator, missing or unbalanced delimiters, or other syntax error. To

construct matrices, use brackets instead of parentheses.

}

for m=1:10

x(1,m) = m+2j

end

for m = 1:10

x(1,m) = m+2j;

end

x

x =

Columns 1 through 6

1.0000 + 2.0000i 2.0000 + 2.0000i 3.0000 + 2.0000i 4.0000 + 2.0000i 5.0000 + 2.0000i 6.0000 + 2.0000i

Columns 7 through 10

7.0000 + 2.0000i 8.0000 + 2.0000i 9.0000 + 2.0000i 10.0000 + 2.0000i

plot(real(x),x)

[Warning: Imaginary parts of complex X and/or Y arguments ignored]

plot(real(x),imag(x))

plot(real(x),imag(x))

diary off

z1 = 2 + 6j

z1 =

2.0000 + 6.0000i

polar(z)

{Undefined function or variable 'z'.

}

polar(z1)

[Warning: Imaginary parts of complex X and/or Y arguments ignored]

[> In <a href="matlab:matlab.internal.language.introspective.errorDocCallback('polar', 'C:\Program Files\MATLAB\R2018a\toolbox\matlab\graph2d\polar.m', 235)" style="font-weight:bold">polar</a> (<a href="matlab: opentoline('C:\Program Files\MATLAB\R2018a\toolbox\matlab\graph2d\polar.m',235,0)">line 235</a>)]

clear all

clc

for m = 1:10

x(1,m) = m+2j;

end

x

x =

Columns 1 through 6

1.0000 + 2.0000i 2.0000 + 2.0000i 3.0000 + 2.0000i 4.0000 + 2.0000i 5.0000 + 2.0000i 6.0000 + 2.0000i

Columns 7 through 10

7.0000 + 2.0000i 8.0000 + 2.0000i 9.0000 + 2.0000i 10.0000 + 2.0000i

polar(real(x),imag(x))

diary off