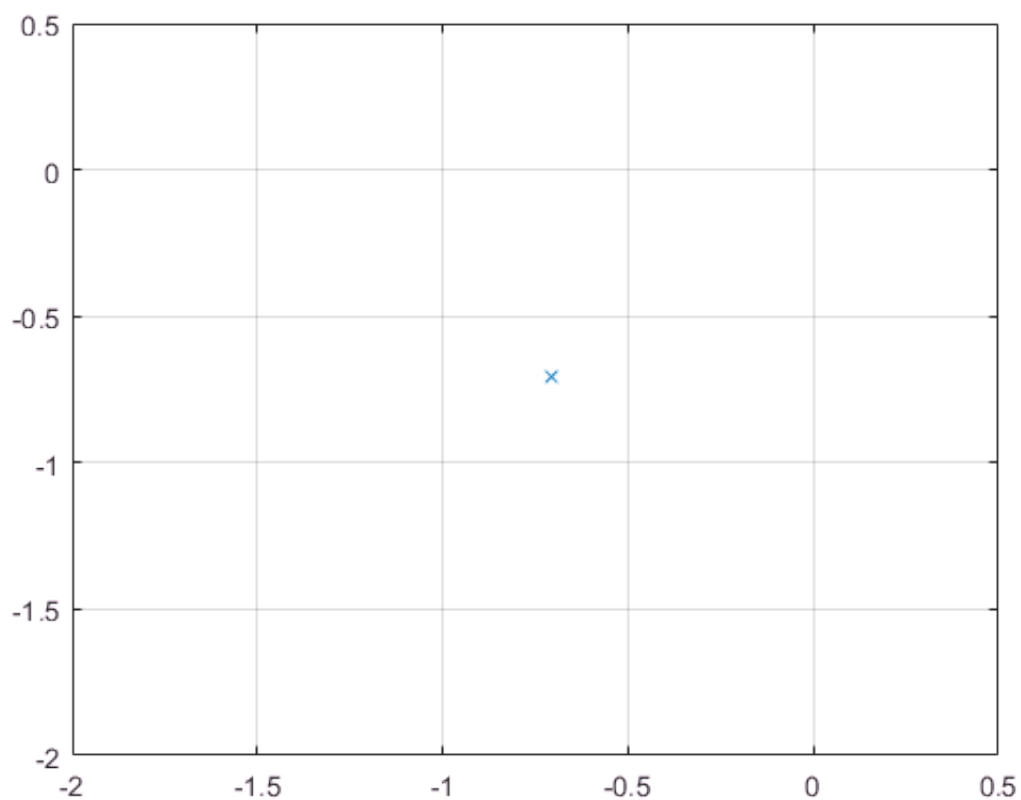


```
%% Tutorial 01: MATLAB SESSION
```

```
% Plotting complex numbers
```

a. $je^{j11\pi/4}$

```
z = j*exp(j*11*pi/4);  
plot(real(z), imag(z), 'x');  
grid on
```



$$\sqrt[n]{r}e^{j(\theta+2\pi k)/n} \quad \text{for } k \in [0..n-1].$$

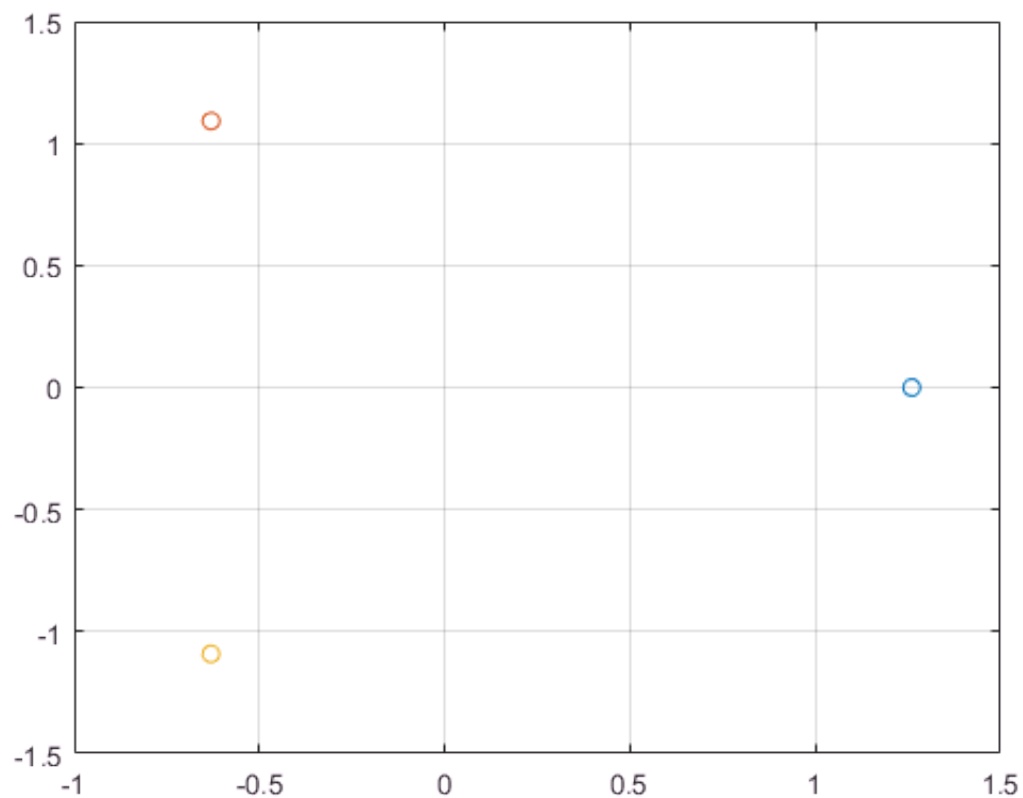
Plots for zeros and poles of:

$$f(z) = \frac{z^3 - 2}{z^5 + 4}$$

```
% Zeros of f(z)
```

```
a = nthroot(2,3);
```

```
for k = 0:2
    z1 = a*exp(j*(2*pi*k)./3);
    plot(real(z1), imag(z1), 'o');
    grid on
    hold on
end
```



```
% Poles of f(z)
```

```
b = nthroot(4,5);
```

```
for k = 0:4
    z2 = b*exp(j*(-pi + 2*pi*k)./5);
    plot(real(z2), imag(z2), 'x');
    hold on
end
```

