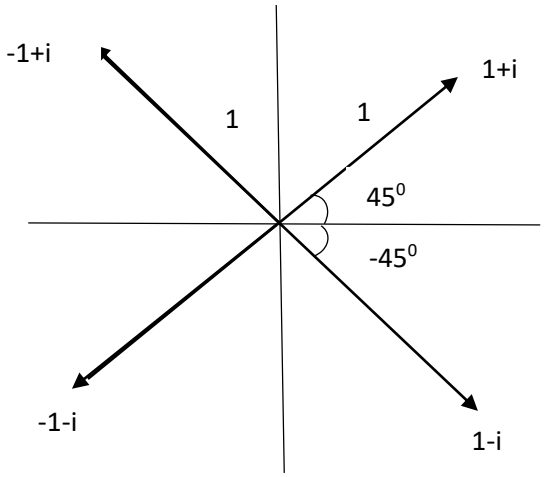
Complex Number



$i = \sqrt{-1}$ $\Rightarrow i^2 = -1$

$i^3 = -1i$ $i^4 = 1$

$\cos 45^0 + i\sin 45^0 = \frac{\sqrt{2}}{2}(1+i)$

$\cos(-45^0) + i\sin(-45^0) = \frac{\sqrt{2}}{2}(1-i)$

$(1+i)^2 = 2i$

$(1+i)^4 = -4$

$(1-i)^4 = -4$

$Z^4 = -4$

The roots are:

1+i

-1+i

-1-i

1-i