Complex Number beginning

Any Complex Number

$Z = \cos\alpha + i\sin\alpha$

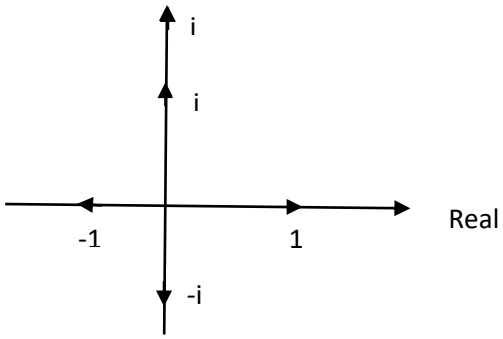
The length of the vector $\sqrt{cos^2\alpha + sin^2\alpha}$ =

$= \sqrt{1} = 1$

$(\cos\alpha + i\sin\alpha)^2 = \cos 2\alpha + i\sin 2\alpha$

$(\cos\alpha + i\sin\alpha)^3 = \cos 3\alpha + i\sin 3\alpha$

$(\cos\alpha + i\sin\alpha)^n = \cos(n\alpha) + i\sin(n\alpha)$



$\cos 0^0 + i\sin 0^0 = 1+0 = 1$

$\cos 90^0 + i\sin 90^0 = i.1 = i$

$\cos 180^0 + i\sin 180^0 = -1$

$\cos 270^0 + i\sin 270^0 = -i$

$\cos 360^0 + i\sin 360^0 = 1$