**Complex numbers powers and roots**:

A complex number z can be represented in the polar form: .

Here R is the magnitude of the “vector” **z**: R = x2 + y2, **z** = x +iy,

A is the polar angle of the “vector” **z**.

**Power:**

.

Here power p is a natural number.

.

**Root of the order of n**:

, k = 0, 1, 2, 3, . . ., (n-1).