 Roots of complex numbers

Showing the roots of complex numbers are evenly spaced



Consider solving

Let

Where and

By De Moivre' s theorem

,

The roots of a complex number lie on a circle with radius and are evenly spaced by equal length arcs which subtend angles of at the origin.



Note: This could be modelled using a numerical example.

Finding the root of complex numbers

1. Solve

Let

By De Moivre' s theorem



There will be 2 roots which are evenly spread over (one revolution).

They will be radians apart.



 and

Polar form:

 and

Cartesian form:

1. Solve



Let

By De Moivre' s theorem

There will be 3 roots which are evenly spread over (one revolution).

They will be or radians apart.

 and

Polar form:

 , and

