

Further Pure Mathematics 1

Complex Numbers

Section 2: The Argand diagram

Crucial points

- 1. Make sure that you can plot complex numbers correctly on the Argand diagram**
Remember in particular that the points z and z^* are reflections of each other in the x axis, and that the points z and $-z$ are rotations of each other through 180° about the origin.
- 2. Make sure that you know how to find the modulus of a complex number**
In particular, don't forget to take the square root!
- 3. Remember the significance of the modulus in the Argand diagram**
The modulus of a complex number z , $|z|$, is the distance of the point representing z from the origin, and $|z - w|$ is the distance between the points representing z and w .
- 4. Make sure that you know how to show addition and subtraction in the Argand diagram**
You need to understand that a complex number can be represented not only by a point in the Argand diagram, but alternatively by a vector.
- 5. Know the form of a circle in the Argand diagram**
You need to recognise that any set of points of the form $|z - (a + bj)| = r$ represents a circle, centre $a + bj$, radius r .