



Complex Numbers Glossary

Term	Definition
Complex number	A number that has both a real part and an imaginary part, typically written in the form $a + bi$, where a and b are real numbers and i is the imaginary unit ($\sqrt{-1}$).
Real part	The real number component of a complex number.
Imaginary part	The imaginary number component of a complex number.
Modulus	The absolute value or magnitude of a complex number, representing its distance from the origin on the Argand diagram.
Argument	The angle (measured in radians) between the positive real axis and the line joining the origin to the point representing the complex number on the Argand diagram.
Polar form	The representation of a complex number in terms of its modulus and argument, typically written in the form $r \operatorname{cis} \theta$, where r is the modulus and θ is the argument.
Rectangular form	The representation of a complex number in the standard $a + bi$ form, where a is the real part and b is the imaginary part.
Conjugate	For a complex number $a + bi$, the conjugate is $a - bi$.
Loci	The set of all points that satisfy a given condition or equation.
Root	A value of a variable for which an equation or function is equal to zero.
Argand diagram	A graphical representation of complex numbers on a coordinate plane, with the real part on the horizontal axis and the imaginary part on the vertical axis.
De Moivre's theorem	A theorem that relates the powers of a complex number to its modulus and argument.