1.12 Introduction to complex numbers

Checklist

What you should know

By the end of this subtopic you should be able to:

- find complex roots of quadratic equations
- recognise that complex solutions to quadratic equations with real coefficients come in complex conjugate pairs
- given $z = a + b\text{i}$, identify that $\text{Re}\,(z) = a$ and $\text{Im}\,(z) = b$
- add, subtract, multiply and divide complex numbers analytically and using a calculator
- write the complex conjugate of a complex number and use it to perform division
- use the equality property of complex numbers to solve for variables
- solve systems of equations with complex number coefficients and solutions
- find powers of complex numbers using the calculator
- represent complex numbers on the Argand plane
- find the modulus and argument of a complex number and use these to graph complex numbers.