OCR Further Pure 1

Complex Numbers

Section 1: Introduction to complex numbers

Crucial points

1. **Simplify where possible**
   Remember that when you are working with complex numbers, you should always simplify i^2 to -1.

2. **Make sure that you know what a complex conjugate is**
   Remember that for a complex number $z = x + iy$, the complex conjugate $z^* = x - iy$.

3. **Remember that the product of a complex number and its conjugate is real**
   In particular, when dividing complex numbers you need to use the fact that zz^* is always real.

4. **Remember that complex roots of quadratic equations occur in conjugate pairs**

5. **Remember that you can equate real and imaginary parts**
   For two complex numbers to be equal, the real parts must be equal and the imaginary parts must be equal. This means that an equation in two unknowns involving complex numbers can be written as two equations, which can then be solved simultaneously.