

## Section 1: Introduction to complex numbers

### Crucial points

1. **Always simplify  $i^2$**   
Remember that when you are working with complex numbers, you should always simplify  $i^2$  to  $-1$ .
2. **Remember that  $zz^*$  is always real**  
In particular, remember that you can use this in dividing complex numbers.
3. **Make sure that you know the condition for equality**  
For two complex numbers to be equal, the real parts must be equal and the imaginary parts must be equal.