

# Further Pure Mathematics 1

## Complex Numbers Unit 3

### Hints

Exercise 2F

#### Question 1 Hint level 2

The set of points given by  $\arg(z - (a + bj)) = \theta$  is a straight line from the point  $a + bj$  making an angle  $\theta$  with a line parallel to the real axis. Note that  $\arg(z - (a + bj))$  is undefined when  $z = a + bj$ , so the point  $a + bj$  is excluded from the set of points (use an open circle to show this).

For a set of points given by  $\arg(z - (a + bj)) \leq \theta$  or  $\arg(z - (a + bj)) \geq \theta$  shade the appropriate side of the line.