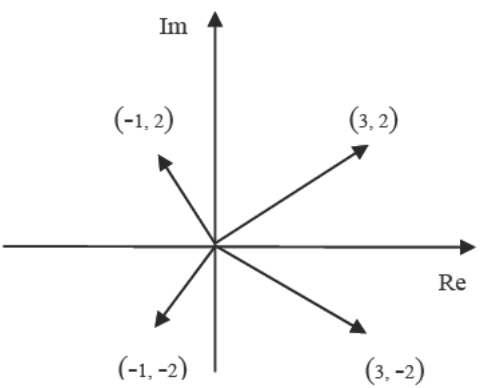
Question	Scheme	Marks	AOs
3	$z = 3 - 2\text{i}$ is also a root	B1	1.2
	$\left(z-\left(3+2\text{i}\right)\right)\left(z-\left(3-2\text{i}\right)\right)=\ldots$ **or** Sum of roots = 6, Product of roots = 13 $\Rightarrow \ldots$	M1	3.1a
	$= z^2 - 6z + 13$	A1	1.1b
	$\left(z^4 + az^3 + 6z^2 + bz + 65\right) = \left(z^2 - 6z + 13\right)\left(z^2 + cz + 5\right) \Rightarrow c = \ldots$	M1	3.1a
	$z^2 + 2z + 5 = 0$	A1	1.1b
	$z^2 + 2z + 5 = 0 \Rightarrow z = \ldots$	M1	1.1a
	$z = -1 \pm 2\text{i}$	A1	1.1b
		B1 $3 \pm 2\text{i}$ Plotted correctly	1.1b
		B1ft $-1 \pm 2\text{i}$ Plotted correctly	1.1b
			(9 marks)

Notes:

B1: Identifies the complex conjugate as another root
M1: Uses the conjugate pair and a correct method to find a quadratic factor
A1: Correct quadratic
M1: Uses the given quartic and their quadratic to identify the value of c
A1: Correct 3TQ
M1: Solves their second quadratic
A1: Correct second conjugate pair
B1: First conjugate pair plotted correctly and labelled
B1ft: Second conjugate pair plotted correctly and labelled (Follow through their second conjugate pair)