

Name :

- 1) Write $z = 6\text{cis}(75^\circ)$ in the algebraic form
- 2) Write $z = \frac{-100i}{3+4i}$ in the algebraic form and trigonometric form
- 3) Solve $(\bar{z})^2 = -4i$. Give the answers in the trigonometric form.
- 4) Check that $z_1 = 1 - 7i$ is a solution of $3z^2 - 6z + 150 = 0$ and determine the other solution.
- 5) Give the geometric interpretation of the transformations $f(z) = 5z$ and of $g(z) = \bar{z} + 3i$