Practice worksheet | Complex numbers

Linear factorisation over the complex numbers

Name: _____ Date: _____

6 questions | 19 marks

1. Factor $z^2 + 16$ into complex linear factors. [2 marks]

2. Factor $z^2 - 2z + 5$ over the complex numbers. [3 marks]

3. Factor $3z^2 + 12$ over the complex numbers. [3 marks]

4. Expand $(z + 2 - 3i)(z + 2 + 3i)$. [3 marks]

5. A quadratic has leading coefficient -2 and roots $2 \pm i$. Write it in factored and expanded forms. [4 marks]

6. Factor $(z^2 + 1)(z^2 - 4)$ into four linear factors and list its roots. [4 marks]