Practice worksheet | Real Polynomials

Factor theorem

Name: _____ Date: _____

6 questions | 14 marks

1. Show that $x-1$ is a factor of x^3-4x+3. [2 marks]

2. Find k if $x+2$ is a factor of x^3+kx+2. [2 marks]

3. Find k if $2x-1$ is a factor of $4x^3+kx-1$. [2 marks]

4. Factor $x^3 - 4x^2 - x + 4$ completely. [2 marks]

5. Show that $x + 1$ is a repeated factor of $x^3 + x^2 - x - 1$. [2 marks]

6. $P(x) = x^3 + ax + b$ has factors $x - 1$ and $x + 2$. Find a, b and the third linear factor. [4 marks]