Practice worksheet | Real Polynomials

Graphing real polynomials

Name: _____ Date: _____

6 questions | 15 marks

1. For $P(x) = x(x-2)^2$, state roots, multiplicities and end behaviour. [2 marks]

2. Find the y-intercept and end behaviour of $P(x) = -2(x+1)(x-3)$. [2 marks]

3. State the sign of $(x+1)^2(x-2)$ on the intervals separated by -1 and 2. [2 marks]

4. Write a monic quartic that touches the axis at -2 and 1 and has no other roots. Find its y-intercept. [2 marks]

5. Find the stationary points of $P(x) = x^3 - 6x^2 + 9x$. [4 marks]

6. Explain why a positive-leading cubic must have at least one real zero. [3 marks]