Practice worksheet | Quadratics and polynomial graphs

Cubic and quartic graphs and models

Name: _____ Date: _____

6 questions | 15 marks

1. Describe crossing/touching roots of $y = (x + 1)(x - 2)^2$. [2 marks]

2. State end behaviour of $y = -2x^4 + 3x - 1$. [2 marks]

3. Solve $x^4 - 10x^2 + 9 = 0$. [3 marks]

4. Solve $x^4 + x^2 - 6 = 0$ for real x. [3 marks]

5. Cut squares of side x cm from the corners of a 12 cm by 8 cm sheet and fold a box. Give volume and domain. [3 marks]

6. A box has volume $V = x(12 - 2x)(8 - 2x)$ cubic centimetres. Find its volume when $x = 1$ and when $x = 2$. [2 marks]