### Null Factor Law
Year Ten Advanced Homework Sheet # 3, Term 3

Name: ____________________________  Due Date: 

1. Explain how to recognise a quadratic equation.

2. Solve for \( x \) using the null factor law
   
   a) \[ x(x + 5) = 0 \]
   
   b) \[ 2x(3x - 1) = 0 \]
   
   c) \[ (x + 1)(x - 5) = 0 \]
   
   d) \[ (2x + 1)(x + 5) = 0 \]
   
   e) \[ x^2 = 81 \]
   
   f) \[ (x - 7)^2 = 0 \]

3. Solve by completing the square:
   
   a) \[ x^2 + 2x - 5 = 0 \]
   
   b) \[ x^2 - 6x + 7 = 0 \]
   
   c) \[ x^2 + 5x - 3 = 0 \]
   
   d) \[ x^2 - 5x + 6 = 0 \]
   
   e) \[ x^2 - x - 42 = 0 \]