Mathematics MPM2D1   Name: ———————————————————
Mr. P. Shosenberg   Due: Monday/Tuesday March 15/16, 2021

Assignment: Factoring Quadratic Relations (33 Marks)

1. Factor each expression completely: (12 marks)

   a) $x^2 + 2x - 15$

   b) $x^2 - 2x - 3$

   c) $x^2 - 1$

   d) $3a^2 - 3a - 36$

   e) $2x^2 + 14x - 120$

   f) $5x(x-2) - 3(x-2)$

2. Factor completely using the <u>most appropriate method</u>. Name the method used. (10 marks)

   a) $3x^2 + 11x + 6$

   b) $4x^2 - 225$

   c) $18x^2 - 48x + 32$

Method Used:

   a) ———————————————————

   b) ———————————————————

   c) ———————————————————

3. Given a quadratic equation in standard form $y = -2x^2 + 12x - 10$

  i) factor the equation; **(3 marks)**

  ii) determine the zeros; **(2 marks)**

  iii) use the axis of symmetry to determine the coordinates of the vertex (algebraically); **(4 marks)**

  iv) sketch and label a graph of the relation. **(2 marks)**