ERL MCR UNIT 2

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UNIT 2 MCR 3UI Exam Review

1. Determine the maximum/minimum value and where it occurs by partial factoring and by completing the square. (Must use fractions for this – no decimals on exam)

$$y = -3x^2 + 21x - 2$$

2. Solve using the quadratic formula. (Simplified exact answers on exam… no decimals)

a) $12x = 8x^2 + 1$

b) $5x^2 - 19x - 4 = 0$

3. Solve by factoring.

a) $5x^2 + 13x - 6 = 0$

b) $4x^2 = 5x$

c) $9x^2 = 1$

4. Simplify. Ensure all denominators are rational numbers.

a) $24\sqrt{20} - 7\sqrt{45}$

b) $(3\sqrt{2})(5\sqrt{14})$

c) $\frac{10\sqrt{20}}{2\sqrt{5}}$

d) $\frac{4}{\sqrt{3}}$

5. Determine the family of parabolas with roots $7 \pm \sqrt{3}$