MCR3U **Unit 2 Quiz #1 Lessons 2.1 – 2.2B** Name Solutions

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Simplify. State restrictions.

a) $\frac{24-8x}{x^2-9}$ -1

$= \frac{8(3-x)}{(x-3)(x+3)}$ ✓

$= \frac{-8}{x+3}, x \neq \pm 3$ ½ ✓

b) $\frac{12x^2-22x+8}{3x} \div \frac{3x^2+2x-8}{2x^2+4x}$ ✓✓

$= \frac{2(6x^2-11x+4)}{3x} \div \frac{(3x-4)(x+2)}{2x(x+2)}$

$= \frac{2(3x-4)(2x-1)}{3x} \times \frac{2x}{(3x-4)}$ ✓

$= \frac{4(2x-1)}{3}, x \neq -2, 0, \frac{4}{3}$ ✓

c) $\frac{x-1}{x-2} - \frac{x^2+4x-4}{x^2+4x-12}$

$= \frac{(x-1)}{(x-2)} - \frac{(x^2+4x-4)}{(x-2)(x+6)}$ ½

$= \frac{(x-1)(x+6)}{(x-2)(x+6)} - \frac{(x^2+4x-4)}{(x-2)(x+6)}$ ½

$= \frac{x^2+5x-6-x^2-4x+4}{(x-2)(x+6)}$

$= \frac{(x-2)}{(x-2)(x+6)}$ ✓

$= \frac{1}{x+6}, x \neq -6, 2$ ½ ✓