

Problem Set #1

A) State the excluded values. B) Simplify. Leave in factored form. [12-1]

1) $\frac{4x + 48}{x^2 - 144}$

Simplify. [12(2-3)]

2) $\frac{4 - x}{12x + 36} \cdot \frac{6x + 18}{x - 4}$

3) $\frac{6}{x^2 - 4x - 32} \div \frac{3}{5x - 40}$

Problem Set #2

Divide. [12-4]

4) $(15x^7 - 30x^5 + 35x^2 - 10) \div 5x$

Divide by long division. [12-4]

5) $(6x^2 - 11x + 2) \div (3x - 4)$

6) $(4x^3 + 5x^2 - 3) \div (x + 2)$

Problem Set #3

Simplify. [12(5-6)]

7) $\frac{8x + 15}{x + 3} - \frac{2x - 9}{x + 3}$

8) $\frac{5x - 11}{x - 10} + \frac{2x}{10 - x}$

9) $\frac{4}{x + 5} - \frac{7}{10}$

10) $\frac{39}{3x + 6} - \frac{3}{x + 3}$

Problem Set #4

Solve and then check in the original equation using the order of operations. [12-8]

11) $\frac{4}{x+2} - \frac{1}{x} = \frac{1}{x}$

12) How many multipliers are in the numerator of $\frac{11(x + 10)(x - 5)(7 - x)}{2(5x + 3)(7x - 8)}$? [12-1]

13) Given $\frac{12x(x + 1)(x - 5)}{4(3x - 11)}$, can the 12 in the numerator cancel/simplify with the 4 in the denominator? [12-1]