

Class Review of Rational Expressions Operations and Solving

Simplify:

$$1. \frac{x^2 + 3x + 2}{x^2 - 4x - 12}$$

$$2. \frac{8x + 16}{x^2 + 2x - 24} \cdot \frac{x^2 - 36}{2x - 12}$$

$$3. \frac{3x + 15}{2x^2 + 8x} \div \frac{x^2 + 2x - 15}{2x^2 - 6x}$$

$$4. \frac{x^2 + 3x + 10}{x^2 - 7x - 18} + \frac{5x + 2}{x^2 - 7x - 18}$$

$$5. \frac{8x^2 + 5x + 3}{x^2 + 11} - \frac{3x^2 + 2x - 7}{x^2 + 11}$$

$$6. \frac{3}{x + 5} + \frac{x + 1}{x - 2}$$

$$7. \text{ State the Domain of the following function: } f(x) = \frac{(x + 3)(x + 5)}{(x + 6)(x - 2)}$$

8.

9.

$$\frac{1}{x-2} + \frac{x}{x-6} = \frac{6}{x^2-8x+12}$$

$$\frac{5}{x+6} + \frac{4}{x+3} = 3$$

10.

$$\frac{3x-5}{x^2-25} - \frac{2}{x+5}$$