

Algebra 2H

Rational Functions Review

Simplify

$$1. \frac{4x-9}{x^2+5x-24} + \frac{5x}{x+8}$$

$$2. \frac{x+2}{x^2+4x+3} - \frac{5x}{x^2-9}$$

$$3. \frac{16x^2-8x+1}{x^3-7x^2+12x} \div \frac{20x^2-5x}{15x^3}$$

$$4. \frac{\frac{3}{x+5}}{\frac{2}{x-3} + \frac{1}{x+5}}$$

$$9. \text{Graph } y = \frac{x^2-4}{x^2+8x+15}$$

$$10. \text{Graph } y = \frac{2x+2}{x^2-1}$$

Solve

$$5. \frac{1}{x+6} + \frac{x+1}{x} = \frac{13}{x+6}$$

$$6. \frac{3x}{x+1} = 2 + \frac{12}{x^2-1}$$

$$7. \frac{x+2}{x+3} < \frac{x-1}{x-2}$$

$$8. \frac{5}{x+3} \geq \frac{4}{x+2}$$

$$11. \text{Graph } y = \frac{x^2-1}{x+4}$$

$$12. \text{Graph } y = \frac{x-3}{x^2}$$