

Warm-up 3/28/17

Simplify.

$$\frac{x}{x^2-9} + \frac{x+1}{x^2+6x+9} = \frac{x^2+3x}{(x+3)^2(x-3)} + \frac{x^2-2x-3}{(x+3)^2(x-3)}$$

$$= \frac{2x^2+x-3}{(x+3)^2(x-3)}$$

$$(x-1)(2x+3)$$

$$\frac{x^2-6x-27}{2x^2+2x} \div \frac{x^2-14x+45}{x^2}$$

$$\frac{(x+3)(x-9)}{2x(x+1)} \cdot \frac{x^2}{(x-9)(x-5)} = \frac{x(x+3)}{2(x+1)(x-5)}$$

$$\frac{12}{x^2 + 5x - 24} + \frac{3}{x-3} = \frac{12}{(x-3)(x+8)} + \frac{3x+24}{3(x+8)}$$
$$= \frac{3x+36}{(x-3)(x+8)}$$