

Adding & Subtracting

$$1. \frac{x+7}{2x+14} - \frac{5x}{-3x-21}$$

$$\frac{x+7}{2(x+7)} - \frac{5x}{-3(x+7)}$$

CD: $-6(x+7)$ $x \neq -7$

$$\frac{x+7(-3)}{-6(x+7)} - \frac{5x(2)}{-6(x+7)}$$

$$\frac{-3x-21-10x}{-6(x+7)} = \frac{-13x-21}{-6(x+7)} \text{ or } \frac{13x+21}{6(x+7)}$$

$$2. \frac{5x-1}{2x+6} + \frac{16x}{x^2-9}$$

$$\frac{5x-1}{2(x+3)} + \frac{16x}{(x+3)(x-3)}$$

CD: $2(x+3)(x-3)$ $x \neq 3, -3$

$$\frac{(5x-1)(x-3)}{2(x+3)(x-3)} + \frac{16x(2)}{2(x+3)(x-3)}$$

$$(5x-1)(x-3)$$

$$5x^2 - 15x - x + 3$$

$$\frac{5x^2 - 16x + 3}{2(x+3)(x-3)} = \frac{5x^2 + 16x + 3}{2(x+3)(x-3)}$$

*check if
it
can factor*

*add \Rightarrow 16
mult \Rightarrow 15
15 \neq 1*

$$(5x^2 + 15x) + (x + 3)$$

$$5x(x+3) + 1(x+3)$$

$$(5x+1)(x+3)$$

x Board
Broke

