Warmup:

Simplify each expression.
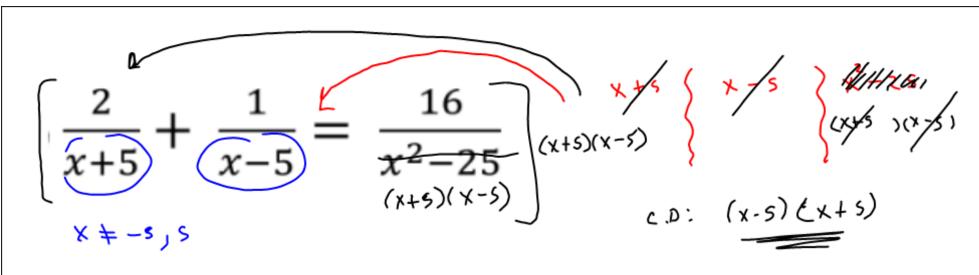
$$\left(2 \cdot \frac{2}{2 \cdot (3x+9)} + \frac{[5x \cdot (3x+9)]}{2 \, (3x+9)} \right] \begin{array}{c} 3x+9 \\ \end{array} \Big\} 2$$

$$\frac{4}{2(3x+9)} + \frac{15x^2+45x}{2(3x+9)} \qquad 2(3x+9)$$

$$\boxed{\frac{15x^2+45x+4}{2(3x+9)}}$$

$$2 \Big\{ \, 2(b+1)$$

$$\text{L.C.D.} : \ 2(b+1)$$

$$\frac{(b+1)}{(b+1)} \, \frac{6}{2} - \frac{3b}{(2b+2)} \cdot 2(b+1)$$

$$\frac{6b+6}{2(b+1)} - \frac{3b}{2(b+1)}$$

$$\frac{6b+6-3b}{2(b+1)} = \frac{3b+6}{2(b+1)}$$

$$= \frac{3(b+2)}{2(b+1)}$$

$$\left[\frac{2}{x+5} + \frac{1}{x-5} = \frac{16}{\underset{(x+5)(x-5)}{x^2-25}}\right] (x+5)(x-5)$$

$x \ne -5, 5$

$\cancel{x+5} \Big\{ \quad x \cancel{-5} \Big\} \cancel{\frac{2}{111261}}$

$\Big\} (x\cancel{+5})(x\cancel{-5})$

$C.D: \quad (x-5)(x+5)$

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

$$\star \quad 2\overparen{(x-5)} + 1\overparen{(x+5)} = 16$$

$$2x - 10 + x + 5 = 16$$

$$3x - 5 = 16 \implies \frac{3x}{3} = \frac{21}{3} \implies \boxed{x = 7}$$

$+5 \qquad +5$

Practice with Solving Equations

Homework:

Solving Rational Equations