The method: Adding and subtracting: same denominator

Add or subtract the numerators and keep the denominator. When subtracting, subtract the whole numerator. Simplify if you can.

$$\frac{6x+3}{x+8} - \frac{5x-5}{x+8} = \frac{6x+3-(5x-5)}{x+8} = \frac{x+8}{x+8}$$ subtract the whole second numerator

$$\frac{x+8}{x+8} = \frac{(x+8)}{x+8} = 1$$ factor the top, then cancel (x + 8)

$$\frac{6x+4}{x+2} - \frac{x+2}{x+2} = \frac{6x+4-(x+2)}{x+2} = \frac{5x+2}{x+2}$$ subtract the whole second numerator

$$\frac{6x+3}{x+5} + \frac{2x-4}{x+5} = \frac{6x+3+2x-4}{x+5} = \frac{8x-1}{x+5}$$ add the numerators

Problems 1 and 2 worked out · Version 0A

$$\frac{2x-4}{x-4} - \frac{5x+5}{x-4} = \frac{2x-4-(5x+5)}{x-4} = \frac{-3x-9}{x-4}$$ subtract the whole second numerator

$$\frac{5x-4}{x-3} + \frac{3x+9}{x-3} = \frac{5x-4+3x+9}{x-3} = \frac{8x+5}{x-3}$$ add the numerators

Adding and subtracting: same denominator · Versi…

1) $\frac{-3x-9}{x-4}$ 2) $\frac{8x+5}{x-3}$ 3) $\frac{-3x-2}{x+4}$ 4) $\frac{4x-12}{x+7}$

5) $\frac{-x+7}{x-6}$ 6) $\frac{6x+1}{x+1}$ 7) $\frac{5x-1}{x-1}$ 8) $\frac{4x-1}{x-3}$ 9) $\frac{9x-9}{x+7}$

10) $\frac{4x+2}{x+6}$ 11) $\frac{3x+4}{x+8}$ 12) $\frac{x+12}{x-2}$ 13) $\frac{3x-3}{x+4}$

14) $\frac{4x-3}{x-7}$ 15) $\frac{-x+2}{x-7}$ 16) $\frac{6x-3}{x+3}$ 17) $\frac{8x-11}{x+8}$

18) $\frac{8x-10}{x-3}$ 19) $\frac{7x+16}{x-4}$ 20) $\frac{12x+1}{x-3}$ 21) $\frac{10x+3}{x-4}$

22) $\frac{4x+10}{x+8}$ 23) $\frac{-4x+4}{x-4}$ 24) $\frac{3x-4}{x+8}$ 25) $\frac{-x+1}{x-2}$

26) $\frac{4x+16}{x-5}$ 27) $\frac{12x-4}{x+1}$ 28) $\frac{3x-12}{x-3}$ 29) -3

30) $\frac{-x+11}{x+8}$ 31) $\frac{9x-7}{x-1}$ 32) $\frac{10x+5}{x-1}$ 33) $\frac{6x+7}{x-4}$

34) $\frac{-x-2}{x-2}$