



Air maths tuition

Interact, engage and perform

Adding and Subtracting Algebraic Fractions (2)

$$\begin{aligned} \frac{3}{x-4} - 2 &\equiv \frac{3(1) - 2(x-4)}{x-4} \\ &\equiv \frac{3 - 2x + 8}{x-4} \\ &\equiv \frac{11 - 2x}{x-4} \end{aligned} \quad \left| \quad \begin{aligned} \frac{3}{x+1} - \frac{2}{x^2+4x+3} &\equiv \frac{3}{x+1} - \frac{2}{(x+3)(x+1)} \\ &\equiv \frac{3(x+3) - 2(1)}{(x+3)(x+1)} \\ &\equiv \frac{3x + 7}{(x+3)(x+1)} \end{aligned}$$

$$\begin{aligned} \frac{1}{x} + \frac{2}{x-3} - \frac{4}{x^2-9} &\equiv \frac{1}{x} + \frac{2}{x-3} - \frac{4}{(x+3)(x-3)} \\ &\equiv \frac{1(x-3)(x+3) + 2x(x+3) - 4x}{x(x-3)(x+3)} \\ &\equiv \frac{x^2-9 + 2x^2+6x-4x}{x(x-3)(x+3)} \\ &\equiv \frac{3x^2+2x-9}{x(x-3)(x+3)} \end{aligned}$$

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