



Air maths tuition

Interact, engage and perform

Adding and Subtracting Algebraic Fractions (1)

$$\begin{aligned}\frac{1}{2} + \frac{2}{3} - \frac{3}{4} &= \frac{1}{2} \times \frac{6}{6} + \frac{2}{3} \times \frac{4}{4} - \frac{3}{4} \times \frac{3}{3} \\ &= \frac{1(6) + 2(4) - 3(3)}{12} \\ &= \frac{5}{12}\end{aligned}$$

common factors

$$\begin{aligned}\frac{3}{8} - \frac{1}{4} &= \frac{3}{8} - \frac{1}{4} \times \frac{2}{2} \\ &= \frac{3 - 1(2)}{8} \\ &= \frac{1}{8}\end{aligned}$$

$$\begin{aligned}\frac{a}{b} + \frac{c}{d} - \frac{e}{f} &\equiv \frac{a(df) + c(bf) - e(bd)}{bdf} \\ &\equiv \frac{adf + cbf - ebd}{bdf}\end{aligned}$$

$$\begin{aligned}\frac{a}{4bc} - \frac{d}{8c} &\equiv \frac{a(2) - d(b)}{8bc} \\ &\equiv \frac{2a - bd}{8bc}\end{aligned}$$

$$\begin{aligned}2 - \frac{a}{5b^2c^3} + \frac{3e}{2b^5cd} &\equiv \frac{2(10b^5c^3d) - a(2b^3d) + 3e(5c^2)}{10b^5c^3d} \\ &\equiv \frac{20b^5c^3d - 2ab^3d + 15ec^2}{10b^5c^3d}\end{aligned}$$

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