

分数の一次式の減法

次の計算をしましょう。

$$\textcircled{1} \left(\frac{5}{7}x - \frac{3}{4} \right) - \left(\frac{2}{9}x + \frac{1}{5} \right)$$

$$\textcircled{4} \left(\frac{1}{4}x - \frac{5}{6} \right) - \left(-\frac{2}{7}x - \frac{6}{9} \right)$$

$$\textcircled{2} \left(\frac{6}{7}x + \frac{3}{8} \right) - \left(\frac{1}{3}x - \frac{1}{7} \right)$$

$$\textcircled{5} \left(\frac{1}{4}x - \frac{1}{3} \right) - \left(-\frac{1}{3}x - \frac{3}{7} \right)$$

$$\textcircled{3} \left(\frac{4}{5}x + \frac{3}{5} \right) - \left(\frac{1}{4}x + \frac{4}{7} \right)$$

$$\textcircled{6} \left(\frac{2}{7}x + \frac{2}{5} \right) - \left(-\frac{2}{5}x + \frac{4}{7} \right)$$

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$$\begin{aligned}\textcircled{1} \quad & \left(\frac{5}{7}x - \frac{3}{4}\right) - \left(\frac{2}{9}x + \frac{1}{5}\right) \\ &= \frac{5}{7}x - \frac{2}{9}x - \frac{3}{4} - \frac{1}{5} \\ &= \frac{45}{63}x - \frac{14}{63}x - \frac{15}{20} - \frac{4}{20} \\ &= \frac{31}{63}x - \frac{19}{20}\end{aligned}$$

$$\begin{aligned}\textcircled{4} \quad & \left(\frac{1}{4}x - \frac{5}{6}\right) - \left(-\frac{2}{7}x - \frac{6}{9}\right) \\ &= \frac{1}{4}x + \frac{2}{7}x - \frac{5}{6} + \frac{6}{9} \\ &= \frac{7}{28}x + \frac{8}{28}x - \frac{15}{18} + \frac{12}{18} \\ &= \frac{15}{28}x - \frac{3}{18} \\ &= \frac{15}{28}x - \frac{1}{6}\end{aligned}$$

$$\begin{aligned}\textcircled{2} \quad & \left(\frac{6}{7}x + \frac{3}{8}\right) - \left(\frac{1}{3}x - \frac{1}{7}\right) \\ &= \frac{6}{7}x - \frac{1}{3}x + \frac{3}{8} + \frac{1}{7} \\ &= \frac{18}{21}x - \frac{7}{21}x + \frac{21}{56} + \frac{8}{56} \\ &= \frac{11}{21}x + \frac{29}{56}\end{aligned}$$

$$\begin{aligned}\textcircled{5} \quad & \left(\frac{1}{4}x - \frac{1}{3}\right) - \left(-\frac{1}{3}x - \frac{3}{7}\right) \\ &= \frac{1}{4}x + \frac{1}{3}x - \frac{1}{3} + \frac{3}{7} \\ &= \frac{3}{12}x + \frac{4}{12}x - \frac{7}{21} + \frac{9}{21} \\ &= \frac{7}{12}x + \frac{2}{21}\end{aligned}$$

$$\begin{aligned}\textcircled{3} \quad & \left(\frac{4}{5}x + \frac{3}{5}\right) - \left(\frac{1}{4}x + \frac{4}{7}\right) \\ &= \frac{4}{5}x - \frac{1}{4}x + \frac{3}{5} - \frac{4}{7} \\ &= \frac{16}{20}x - \frac{5}{20}x + \frac{21}{35} - \frac{20}{35} \\ &= \frac{11}{20}x + \frac{1}{35}\end{aligned}$$

$$\begin{aligned}\textcircled{6} \quad & \left(\frac{2}{7}x + \frac{2}{5}\right) - \left(-\frac{2}{5}x + \frac{4}{7}\right) \\ &= \frac{2}{7}x + \frac{2}{5}x + \frac{2}{5} - \frac{4}{7} \\ &= \frac{10}{35}x + \frac{14}{35}x + \frac{14}{35} - \frac{20}{35} \\ &= \frac{24}{35}x - \frac{6}{35}\end{aligned}$$