

分数の一次式の減法

次の計算をしましょう。

$$\textcircled{1} \left(\frac{3}{4}x - \frac{5}{8} \right) - \left(\frac{2}{7}x - \frac{4}{7} \right)$$

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

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

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

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

$$\textcircled{6} \left(\frac{1}{4}x + \frac{1}{5} \right) - \left(-\frac{2}{3}x - \frac{4}{7} \right)$$

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$$\begin{aligned}\textcircled{1} \quad & \left(\frac{3}{4}x - \frac{5}{8}\right) - \left(\frac{2}{7}x - \frac{4}{7}\right) \\ &= \frac{3}{4}x - \frac{2}{7}x - \frac{5}{8} + \frac{4}{7} \\ &= \frac{21}{28}x - \frac{8}{28}x - \frac{35}{56} + \frac{32}{56} \\ &= \frac{13}{28}x - \frac{3}{56}\end{aligned}$$

$$\begin{aligned}\textcircled{4} \quad & \left(\frac{2}{9}x - \frac{3}{5}\right) - \left(-\frac{2}{3}x - \frac{3}{7}\right) \\ &= \frac{2}{9}x + \frac{2}{3}x - \frac{3}{5} + \frac{3}{7} \\ &= \frac{2}{9}x + \frac{6}{9}x - \frac{21}{35} + \frac{15}{35} \\ &= \frac{8}{9}x - \frac{6}{35}\end{aligned}$$

$$\begin{aligned}\textcircled{2} \quad & \left(\frac{1}{4}x - \frac{2}{3}\right) - \left(\frac{1}{5}x - \frac{4}{5}\right) \\ &= \frac{1}{4}x - \frac{1}{5}x - \frac{2}{3} + \frac{4}{5} \\ &= \frac{5}{20}x - \frac{4}{20}x - \frac{10}{15} + \frac{12}{15} \\ &= \frac{1}{20}x + \frac{2}{15}\end{aligned}$$

$$\begin{aligned}\textcircled{5} \quad & \left(\frac{1}{5}x - \frac{3}{4}\right) - \left(-\frac{4}{7}x - \frac{2}{5}\right) \\ &= \frac{1}{5}x + \frac{4}{7}x - \frac{3}{4} + \frac{2}{5} \\ &= \frac{7}{35}x + \frac{20}{35}x - \frac{15}{20} + \frac{8}{20} \\ &= \frac{27}{35}x - \frac{7}{20}\end{aligned}$$

$$\begin{aligned}\textcircled{3} \quad & \left(\frac{3}{4}x + \frac{4}{7}\right) - \left(\frac{2}{5}x - \frac{2}{9}\right) \\ &= \frac{3}{4}x - \frac{2}{5}x + \frac{4}{7} + \frac{2}{9} \\ &= \frac{15}{20}x - \frac{8}{20}x + \frac{36}{63} + \frac{14}{63} \\ &= \frac{7}{20}x + \frac{50}{63}\end{aligned}$$

$$\begin{aligned}\textcircled{6} \quad & \left(\frac{1}{4}x + \frac{1}{5}\right) - \left(-\frac{2}{3}x - \frac{4}{7}\right) \\ &= \frac{1}{4}x + \frac{2}{3}x + \frac{1}{5} + \frac{4}{7} \\ &= \frac{3}{12}x + \frac{8}{12}x + \frac{7}{35} + \frac{20}{35} \\ &= \frac{11}{12}x + \frac{27}{35}\end{aligned}$$