

分数の一次式の減法

次の計算をしましょう。

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

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

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

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

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

$$\textcircled{6} \left(\frac{1}{3}x - \frac{2}{7} \right) - \left(-\frac{4}{9}x - \frac{2}{3} \right)$$

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次の計算をしましょう。

$$\begin{aligned}\textcircled{1} \quad & \left(\frac{2}{5}x - \frac{4}{7}\right) - \left(\frac{1}{8}x - \frac{3}{5}\right) \\ &= \frac{2}{5}x - \frac{1}{8}x - \frac{4}{7} + \frac{3}{5} \\ &= \frac{16}{40}x - \frac{5}{40}x - \frac{20}{35} + \frac{21}{35} \\ &= \frac{11}{40}x + \frac{1}{35}\end{aligned}$$

$$\begin{aligned}\textcircled{4} \quad & \left(\frac{1}{5}x + \frac{2}{3}\right) - \left(-\frac{2}{3}x + \frac{1}{6}\right) \\ &= \frac{1}{5}x + \frac{2}{3}x + \frac{2}{3} - \frac{1}{6} \\ &= \frac{3}{15}x + \frac{10}{15}x + \frac{4}{6} - \frac{1}{6} \\ &= \frac{13}{15}x + \frac{3}{6} \\ &= \frac{13}{15}x + \frac{1}{2}\end{aligned}$$

$$\begin{aligned}\textcircled{2} \quad & \left(\frac{3}{4}x + \frac{3}{7}\right) - \left(\frac{4}{7}x - \frac{2}{5}\right) \\ &= \frac{3}{4}x - \frac{4}{7}x + \frac{3}{7} + \frac{2}{5} \\ &= \frac{21}{28}x - \frac{16}{28}x + \frac{15}{35} + \frac{14}{35} \\ &= \frac{5}{28}x + \frac{29}{35}\end{aligned}$$

$$\begin{aligned}\textcircled{5} \quad & \left(\frac{1}{7}x + \frac{2}{3}\right) - \left(-\frac{2}{3}x - \frac{2}{9}\right) \\ &= \frac{1}{7}x + \frac{2}{3}x + \frac{2}{3} + \frac{2}{9} \\ &= \frac{3}{21}x + \frac{14}{21}x + \frac{6}{9} + \frac{2}{9} \\ &= \frac{17}{21}x + \frac{8}{9}\end{aligned}$$

$$\begin{aligned}\textcircled{3} \quad & \left(\frac{7}{8}x + \frac{1}{3}\right) - \left(\frac{5}{7}x - \frac{3}{5}\right) \\ &= \frac{7}{8}x - \frac{5}{7}x + \frac{1}{3} + \frac{3}{5} \\ &= \frac{49}{56}x - \frac{40}{56}x + \frac{5}{15} + \frac{9}{15} \\ &= \frac{9}{56}x + \frac{14}{15}\end{aligned}$$

$$\begin{aligned}\textcircled{6} \quad & \left(\frac{1}{3}x - \frac{2}{7}\right) - \left(-\frac{4}{9}x - \frac{2}{3}\right) \\ &= \frac{1}{3}x + \frac{4}{9}x - \frac{2}{7} + \frac{2}{3} \\ &= \frac{3}{9}x + \frac{4}{9}x - \frac{6}{21} + \frac{14}{21} \\ &= \frac{7}{9}x + \frac{8}{21}\end{aligned}$$