

すきプリ 中学数学

## 文字式の計算【分数】

## もくじ

分数の加減【基本】

分数の加減

分数と数の乗法

約分の練習問題

問題

次の計算をしましょう。

①

$$\frac{5}{6}x + \frac{4}{5}x$$

②

$$3x - \frac{5}{4}x$$

③

$$4y + \frac{5}{4}y$$

④

$$5y + \frac{1}{2}y$$

⑤

$$6x + \frac{1}{2}x$$

⑥

$$-\frac{5}{6}b + 3b$$

1

$$\begin{aligned}\frac{5}{6}x + \frac{4}{5}x &= \left(\frac{5}{6} + \frac{4}{5}\right)x \\ &= \left(\frac{25}{30} + \frac{24}{30}\right)x \\ &= \frac{49}{30}x\end{aligned}$$

2

$$\begin{aligned}3x - \frac{5}{4}x &= \left(3 - \frac{5}{4}\right)x \\ &= \left(\frac{12}{4} - \frac{5}{4}\right)x \\ &= \frac{7}{4}x\end{aligned}$$

3

$$\begin{aligned}4y + \frac{5}{4}y &= \left(4 + \frac{5}{4}\right)y \\ &= \left(\frac{16}{4} + \frac{5}{4}\right)y \\ &= \frac{21}{4}y\end{aligned}$$

4

$$\begin{aligned}5y + \frac{1}{2}y &= \left(5 + \frac{1}{2}\right)y \\ &= \left(\frac{10}{2} + \frac{1}{2}\right)y \\ &= \frac{11}{2}y\end{aligned}$$

5

$$\begin{aligned}6x + \frac{1}{2}x &= \left(6 + \frac{1}{2}\right)x \\ &= \left(\frac{12}{2} + \frac{1}{2}\right)x \\ &= \frac{13}{2}x\end{aligned}$$

6

$$\begin{aligned}-\frac{5}{6}b + 3b &= \left(-\frac{5}{6} + 3\right)b \\ &= \left(-\frac{5}{6} + \frac{18}{6}\right)b \\ &= \frac{13}{6}b\end{aligned}$$

①

$$6x + \frac{3}{2}x$$

②

$$\frac{3}{4}a + \frac{1}{3}a$$

③

$$6b - \frac{3}{2}b$$

④

$$-\frac{1}{6}a - \frac{3}{4}a$$

⑤

$$-\frac{4}{3}a + \frac{3}{4}a$$

⑥

$$\frac{2}{5}x - 6x$$

1

$$\begin{aligned}
 6x + \frac{3}{2}x &= \left(6 + \frac{3}{2}\right)x \\
 &= \left(\frac{12}{2} + \frac{3}{2}\right)x \\
 &= \frac{15}{2}x
 \end{aligned}$$

2

$$\begin{aligned}
 \frac{3}{4}a + \frac{1}{3}a &= \left(\frac{3}{4} + \frac{1}{3}\right)a \\
 &= \left(\frac{9}{12} + \frac{4}{12}\right)a \\
 &= \frac{13}{12}a
 \end{aligned}$$

3

$$\begin{aligned}
 6b - \frac{3}{2}b &= \left(6 - \frac{3}{2}\right)b \\
 &= \left(\frac{12}{2} - \frac{3}{2}\right)b \\
 &= \frac{9}{2}b
 \end{aligned}$$

4

$$\begin{aligned}
 -\frac{1}{6}a - \frac{3}{4}a &= \left(-\frac{1}{6} - \frac{3}{4}\right)a \\
 &= \left(-\frac{2}{12} - \frac{9}{12}\right)a \\
 &= -\frac{11}{12}a
 \end{aligned}$$

5

$$\begin{aligned}
 -\frac{4}{3}a + \frac{3}{4}a &= \left(-\frac{4}{3} + \frac{3}{4}\right)a \\
 &= \left(-\frac{16}{12} + \frac{9}{12}\right)a \\
 &= -\frac{7}{12}a
 \end{aligned}$$

6

$$\begin{aligned}
 \frac{2}{5}x - 6x &= \left(\frac{2}{5} - 6\right)x \\
 &= \left(\frac{2}{5} - \frac{30}{5}\right)x \\
 &= -\frac{28}{5}x
 \end{aligned}$$

①

$$\frac{4}{3}b + 6b$$

②

$$-\frac{1}{5}a - 5a$$

③

$$-\frac{4}{3}x - 4x$$

④

$$-\frac{5}{6}b - \frac{3}{2}b$$

⑤

$$6a - \frac{3}{4}a$$

⑥

$$\frac{3}{5}a - 6a$$



1

$$\begin{aligned}\frac{4}{3}b + 6b &= \left(\frac{4}{3} + 6\right)b \\ &= \left(\frac{4}{3} + \frac{18}{3}\right)b \\ &= \frac{22}{3}b\end{aligned}$$

2

$$\begin{aligned}-\frac{1}{5}a - 5a &= \left(-\frac{1}{5} - 5\right)a \\ &= \left(-\frac{1}{5} - \frac{25}{5}\right)a \\ &= -\frac{26}{5}a\end{aligned}$$

3

$$\begin{aligned}-\frac{4}{3}x - 4x &= \left(-\frac{4}{3} - 4\right)x \\ &= \left(-\frac{4}{3} - \frac{12}{3}\right)x \\ &= -\frac{16}{3}x\end{aligned}$$

4

$$\begin{aligned}-\frac{5}{6}b - \frac{3}{2}b &= \left(-\frac{5}{6} - \frac{3}{2}\right)b \\ &= \left(-\frac{5}{6} - \frac{9}{6}\right)b \\ &= -\frac{14}{6}b \\ &= -\frac{7}{3}b\end{aligned}$$

5

$$\begin{aligned}6a - \frac{3}{4}a &= \left(6 - \frac{3}{4}\right)a \\ &= \left(\frac{24}{4} - \frac{3}{4}\right)a \\ &= \frac{21}{4}a\end{aligned}$$

6

$$\begin{aligned}\frac{3}{5}a - 6a &= \left(\frac{3}{5} - 6\right)a \\ &= \left(\frac{3}{5} - \frac{30}{5}\right)a \\ &= -\frac{27}{5}a\end{aligned}$$

①

$$\frac{5}{2}y - 4y$$

②

$$\frac{1}{6}b + \frac{1}{5}b$$

③

$$-6b - \frac{5}{2}b$$

④

$$-\frac{3}{5}a - 4a$$

⑤

$$\frac{1}{6}x + 3x$$

⑥

$$\frac{3}{2}y + \frac{1}{3}y$$

1

$$\begin{aligned}\frac{5}{2}y - 4y &= \left(\frac{5}{2} - 4\right)y \\ &= \left(\frac{5}{2} - \frac{8}{2}\right)y \\ &= -\frac{3}{2}y\end{aligned}$$

2

$$\begin{aligned}\frac{1}{6}b + \frac{1}{5}b &= \left(\frac{1}{6} + \frac{1}{5}\right)b \\ &= \left(\frac{5}{30} + \frac{6}{30}\right)b \\ &= \frac{11}{30}b\end{aligned}$$

3

$$\begin{aligned}-6b - \frac{5}{2}b &= \left(-6 - \frac{5}{2}\right)b \\ &= \left(-\frac{12}{2} - \frac{5}{2}\right)b \\ &= -\frac{17}{2}b\end{aligned}$$

4

$$\begin{aligned}-\frac{3}{5}a - 4a &= \left(-\frac{3}{5} - 4\right)a \\ &= \left(-\frac{3}{5} - \frac{20}{5}\right)a \\ &= -\frac{23}{5}a\end{aligned}$$

5

$$\begin{aligned}\frac{1}{6}x + 3x &= \left(\frac{1}{6} + 3\right)x \\ &= \left(\frac{1}{6} + \frac{18}{6}\right)x \\ &= \frac{19}{6}x\end{aligned}$$

6

$$\begin{aligned}\frac{3}{2}y + \frac{1}{3}y &= \left(\frac{3}{2} + \frac{1}{3}\right)y \\ &= \left(\frac{9}{6} + \frac{2}{6}\right)y \\ &= \frac{11}{6}y\end{aligned}$$

①

$$\frac{5}{2}x - 5x$$

②

$$-\frac{1}{5}a + \frac{3}{2}a$$

③

$$-\frac{2}{3}x + \frac{5}{2}x$$

④

$$2x + \frac{3}{5}x$$

⑤

$$4y - \frac{1}{6}y$$

⑥

$$\frac{3}{2}a - \frac{1}{5}a$$

1

$$\begin{aligned}\frac{5}{2}x - 5x &= \left(\frac{5}{2} - 5\right)x \\ &= \left(\frac{5}{2} - \frac{10}{2}\right)x \\ &= -\frac{5}{2}x\end{aligned}$$

2

$$\begin{aligned}-\frac{1}{5}a + \frac{3}{2}a &= \left(-\frac{1}{5} + \frac{3}{2}\right)a \\ &= \left(-\frac{2}{10} + \frac{15}{10}\right)a \\ &= \frac{13}{10}a\end{aligned}$$

3

$$\begin{aligned}-\frac{2}{3}x + \frac{5}{2}x &= \left(-\frac{2}{3} + \frac{5}{2}\right)x \\ &= \left(-\frac{4}{6} + \frac{15}{6}\right)x \\ &= \frac{11}{6}x\end{aligned}$$

4

$$\begin{aligned}2x + \frac{3}{5}x &= \left(2 + \frac{3}{5}\right)x \\ &= \left(\frac{10}{5} + \frac{3}{5}\right)x \\ &= \frac{13}{5}x\end{aligned}$$

5

$$\begin{aligned}4y - \frac{1}{6}y &= \left(4 - \frac{1}{6}\right)y \\ &= \left(\frac{24}{6} - \frac{1}{6}\right)y \\ &= \frac{23}{6}y\end{aligned}$$

6

$$\begin{aligned}\frac{3}{2}a - \frac{1}{5}a &= \left(\frac{3}{2} - \frac{1}{5}\right)a \\ &= \left(\frac{15}{10} - \frac{2}{10}\right)a \\ &= \frac{13}{10}a\end{aligned}$$

①

$$\frac{3}{5}a + 5a$$

②

$$-4x - \frac{1}{2}x$$

③

$$-\frac{4}{5}b + \frac{4}{3}b$$

④

$$6a - \frac{1}{4}a$$

⑤

$$-\frac{1}{4}a + \frac{3}{4}a$$

⑥

$$-5y + \frac{1}{2}y$$

1

$$\begin{aligned}\frac{3}{5}a + 5a &= \left(\frac{3}{5} + 5\right)a \\ &= \left(\frac{3}{5} + \frac{25}{5}\right)a \\ &= \frac{28}{5}a\end{aligned}$$

2

$$\begin{aligned}-4x - \frac{1}{2}x &= \left(-4 - \frac{1}{2}\right)x \\ &= \left(-\frac{8}{2} - \frac{1}{2}\right)x \\ &= -\frac{9}{2}x\end{aligned}$$

3

$$\begin{aligned}-\frac{4}{5}b + \frac{4}{3}b &= \left(-\frac{4}{5} + \frac{4}{3}\right)b \\ &= \left(-\frac{12}{15} + \frac{20}{15}\right)b \\ &= \frac{8}{15}b\end{aligned}$$

4

$$\begin{aligned}6a - \frac{1}{4}a &= \left(6 - \frac{1}{4}\right)a \\ &= \left(\frac{24}{4} - \frac{1}{4}\right)a \\ &= \frac{23}{4}a\end{aligned}$$

5

$$\begin{aligned}-\frac{1}{4}a + \frac{3}{4}a &= \left(-\frac{1}{4} + \frac{3}{4}\right)a \\ &= \frac{2}{4}a \\ &= \frac{1}{2}a\end{aligned}$$

6

$$\begin{aligned}-5y + \frac{1}{2}y &= \left(-5 + \frac{1}{2}\right)y \\ &= \left(-\frac{10}{2} + \frac{1}{2}\right)y \\ &= -\frac{9}{2}y\end{aligned}$$

問題

次の計算をしましょう。



①

$$\left(-\frac{3}{8}x + \frac{2}{3}\right) + \left(\frac{6}{5}x - 5\right)$$

②

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

③

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

④

$$\left(\frac{5}{6}x + \frac{5}{3}\right) + \left(-\frac{5}{8}x + \frac{2}{5}\right)$$

1

$$\begin{aligned}
& \left(-\frac{3}{8}x + \frac{2}{3}\right) + \left(\frac{6}{5}x - 5\right) \\
&= -\frac{3}{8}x + \frac{2}{3} + \frac{6}{5}x - 5 \\
&= \left(-\frac{3}{8} + \frac{6}{5}\right)x + \frac{2}{3} - 5 \\
&= \left(-\frac{15}{40} + \frac{48}{40}\right)x + \frac{2}{3} - \frac{15}{3} \\
&= \frac{33}{40}x - \frac{13}{3}
\end{aligned}$$

2

$$\begin{aligned}
& \left(\frac{3}{5}x - \frac{5}{6}\right) + \left(-\frac{1}{2}x - \frac{1}{5}\right) \\
&= \frac{3}{5}x - \frac{5}{6} - \frac{1}{2}x - \frac{1}{5} \\
&= \left(\frac{3}{5} - \frac{1}{2}\right)x - \frac{5}{6} - \frac{1}{5} \\
&= \left(\frac{6}{10} - \frac{5}{10}\right)x - \frac{25}{30} - \frac{6}{30} \\
&= \frac{1}{10}x - \frac{31}{30}
\end{aligned}$$

3

$$\begin{aligned}
& \left(\frac{3}{4}x + \frac{3}{8}\right) + \left(\frac{1}{3}x - 2\right) \\
&= \frac{3}{4}x + \frac{3}{8} + \frac{1}{3}x - 2 \\
&= \left(\frac{3}{4} + \frac{1}{3}\right)x + \frac{3}{8} - 2 \\
&= \left(\frac{9}{12} + \frac{4}{12}\right)x + \frac{3}{8} - \frac{16}{8} \\
&= \frac{13}{12}x - \frac{13}{8}
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{5}{6}x + \frac{5}{3}\right) + \left(-\frac{5}{8}x + \frac{2}{5}\right) \\
&= \frac{5}{6}x + \frac{5}{3} - \frac{5}{8}x + \frac{2}{5} \\
&= \left(\frac{5}{6} - \frac{5}{8}\right)x + \frac{5}{3} + \frac{2}{5} \\
&= \left(\frac{20}{24} - \frac{15}{24}\right)x + \frac{25}{15} + \frac{6}{15} \\
&= \frac{5}{24}x + \frac{31}{15}
\end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
& \left(-\frac{4}{5}x - \frac{6}{7}\right) - \left(-\frac{1}{7}x - \frac{1}{6}\right) \\
&= \left(-\frac{4}{5}x - \frac{6}{7}\right) + \left(\frac{1}{7}x + \frac{1}{6}\right) \\
&= -\frac{4}{5}x - \frac{6}{7} + \frac{1}{7}x + \frac{1}{6} \\
&= \left(-\frac{4}{5} + \frac{1}{7}\right)x - \frac{6}{7} + \frac{1}{6} \\
&= \left(-\frac{28}{35} + \frac{5}{35}\right)x - \frac{36}{42} + \frac{7}{42} \\
&= -\frac{23}{35}x - \frac{29}{42}
\end{aligned}$$

2

$$\begin{aligned}
& \left(\frac{1}{5}x + \frac{4}{7}\right) - \left(\frac{2}{7}x - \frac{5}{8}\right) \\
&= \left(\frac{1}{5}x + \frac{4}{7}\right) + \left(-\frac{2}{7}x + \frac{5}{8}\right) \\
&= \frac{1}{5}x + \frac{4}{7} - \frac{2}{7}x + \frac{5}{8} \\
&= \left(\frac{1}{5} - \frac{2}{7}\right)x + \frac{4}{7} + \frac{5}{8} \\
&= \left(\frac{7}{35} - \frac{10}{35}\right)x + \frac{32}{56} + \frac{35}{56} \\
&= -\frac{3}{35}x + \frac{67}{56}
\end{aligned}$$

3

$$\begin{aligned}
& \left(-\frac{4}{7}x - \frac{4}{7}\right) + \left(-\frac{4}{3}x - 7\right) \\
&= -\frac{4}{7}x - \frac{4}{7} - \frac{4}{3}x - 7 \\
&= \left(-\frac{4}{7} - \frac{4}{3}\right)x - \frac{4}{7} - 7 \\
&= \left(-\frac{12}{21} - \frac{28}{21}\right)x - \frac{4}{7} - \frac{49}{7} \\
&= -\frac{40}{21}x - \frac{53}{7}
\end{aligned}$$

4

$$\begin{aligned}
& \left(-\frac{4}{5}x - \frac{1}{7}\right) - \left(\frac{5}{6}x - \frac{2}{3}\right) \\
&= \left(-\frac{4}{5}x - \frac{1}{7}\right) + \left(-\frac{5}{6}x + \frac{2}{3}\right) \\
&= -\frac{4}{5}x - \frac{1}{7} - \frac{5}{6}x + \frac{2}{3} \\
&= \left(-\frac{4}{5} - \frac{5}{6}\right)x - \frac{1}{7} + \frac{2}{3} \\
&= \left(-\frac{24}{30} - \frac{25}{30}\right)x - \frac{3}{21} + \frac{14}{21} \\
&= -\frac{49}{30}x + \frac{11}{21}
\end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
& \left(\frac{3}{2}x + \frac{1}{5}\right) + \left(\frac{3}{8}x - \frac{5}{2}\right) \\
&= \frac{3}{2}x + \frac{1}{5} + \frac{3}{8}x - \frac{5}{2} \\
&= \left(\frac{3}{2} + \frac{3}{8}\right)x + \frac{1}{5} - \frac{5}{2} \\
&= \left(\frac{12}{8} + \frac{3}{8}\right)x + \frac{2}{10} - \frac{25}{10} \\
&= \frac{15}{8}x - \frac{23}{10}
\end{aligned}$$

2

$$\begin{aligned}
& \left(-\frac{1}{3}x - 8\right) + \left(\frac{3}{5}x - 7\right) \\
&= -\frac{1}{3}x - 8 + \frac{3}{5}x - 7 \\
&= \left(-\frac{1}{3} + \frac{3}{5}\right)x - 8 - 7 \\
&= \left(-\frac{5}{15} + \frac{9}{15}\right)x - 8 - 7 \\
&= \frac{4}{15}x - 15
\end{aligned}$$

3

$$\begin{aligned}
& \left(\frac{2}{5}x + \frac{1}{3}\right) - \left(\frac{3}{4}x - 5\right) \\
&= \left(\frac{2}{5}x + \frac{1}{3}\right) + \left(-\frac{3}{4}x + 5\right) \\
&= \frac{2}{5}x + \frac{1}{3} - \frac{3}{4}x + 5 \\
&= \left(\frac{2}{5} - \frac{3}{4}\right)x + \frac{1}{3} + 5 \\
&= \left(\frac{8}{20} - \frac{15}{20}\right)x + \frac{1}{3} + \frac{15}{3} \\
&= -\frac{7}{20}x + \frac{16}{3}
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{3}{4}x + \frac{1}{5}\right) - \left(\frac{1}{8}x + 2\right) \\
&= \left(\frac{3}{4}x + \frac{1}{5}\right) + \left(-\frac{1}{8}x - 2\right) \\
&= \frac{3}{4}x + \frac{1}{5} - \frac{1}{8}x - 2 \\
&= \left(\frac{3}{4} - \frac{1}{8}\right)x + \frac{1}{5} - 2 \\
&= \left(\frac{6}{8} - \frac{1}{8}\right)x + \frac{1}{5} - \frac{10}{5} \\
&= \frac{5}{8}x - \frac{9}{5}
\end{aligned}$$

①

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

②

$$\left(\frac{1}{5}x + \frac{1}{8}\right) - \left(-\frac{5}{4}x + \frac{6}{5}\right)$$

③

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

④

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

1

$$\begin{aligned}
 & \left(-\frac{4}{3}x + \frac{3}{7}\right) - \left(-\frac{5}{8}x + \frac{4}{3}\right) \\
 = & \left(-\frac{4}{3}x + \frac{3}{7}\right) + \left(\frac{5}{8}x - \frac{4}{3}\right) \\
 = & -\frac{4}{3}x + \frac{3}{7} + \frac{5}{8}x - \frac{4}{3} \\
 = & \left(-\frac{4}{3} + \frac{5}{8}\right)x + \frac{3}{7} - \frac{4}{3} \\
 = & \left(-\frac{32}{24} + \frac{15}{24}\right)x + \frac{9}{21} - \frac{28}{21} \\
 = & -\frac{17}{24}x - \frac{19}{21}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{1}{5}x + \frac{1}{8}\right) - \left(-\frac{5}{4}x + \frac{6}{5}\right) \\
 = & \left(\frac{1}{5}x + \frac{1}{8}\right) + \left(\frac{5}{4}x - \frac{6}{5}\right) \\
 = & \frac{1}{5}x + \frac{1}{8} + \frac{5}{4}x - \frac{6}{5} \\
 = & \left(\frac{1}{5} + \frac{5}{4}\right)x + \frac{1}{8} - \frac{6}{5} \\
 = & \left(\frac{4}{20} + \frac{25}{20}\right)x + \frac{5}{40} - \frac{48}{40} \\
 = & \frac{29}{20}x - \frac{43}{40}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(-\frac{5}{2}x + \frac{1}{5}\right) - \left(\frac{4}{3}x - \frac{3}{7}\right) \\
 = & \left(-\frac{5}{2}x + \frac{1}{5}\right) + \left(-\frac{4}{3}x + \frac{3}{7}\right) \\
 = & -\frac{5}{2}x + \frac{1}{5} - \frac{4}{3}x + \frac{3}{7} \\
 = & \left(-\frac{5}{2} - \frac{4}{3}\right)x + \frac{1}{5} + \frac{3}{7} \\
 = & \left(-\frac{15}{6} - \frac{8}{6}\right)x + \frac{7}{35} + \frac{15}{35} \\
 = & -\frac{23}{6}x + \frac{22}{35}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{1}{8}x + \frac{3}{5}\right) + \left(-\frac{3}{4}x + \frac{3}{5}\right) \\
 = & \frac{1}{8}x + \frac{3}{5} - \frac{3}{4}x + \frac{3}{5} \\
 = & \left(\frac{1}{8} - \frac{3}{4}\right)x + \frac{3}{5} + \frac{3}{5} \\
 = & \left(\frac{1}{8} - \frac{6}{8}\right)x + \frac{3}{5} + \frac{3}{5} \\
 = & -\frac{5}{8}x + \frac{6}{5}
 \end{aligned}$$



①

$$\left(-\frac{5}{6}x + \frac{4}{3}\right) - \left(-\frac{3}{8}x - \frac{3}{4}\right)$$

②

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

③

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

④

$$\left(\frac{4}{5}x - 6\right) + \left(\frac{1}{7}x - \frac{1}{8}\right)$$

1

$$\begin{aligned}
& \left(-\frac{5}{6}x + \frac{4}{3}\right) - \left(-\frac{3}{8}x - \frac{3}{4}\right) \\
&= \left(-\frac{5}{6}x + \frac{4}{3}\right) + \left(\frac{3}{8}x + \frac{3}{4}\right) \\
&= -\frac{5}{6}x + \frac{4}{3} + \frac{3}{8}x + \frac{3}{4} \\
&= \left(-\frac{5}{6} + \frac{3}{8}\right)x + \frac{4}{3} + \frac{3}{4} \\
&= \left(-\frac{20}{24} + \frac{9}{24}\right)x + \frac{16}{12} + \frac{9}{12} \\
&= -\frac{11}{24}x + \frac{25}{12}
\end{aligned}$$

2

$$\begin{aligned}
& \left(\frac{2}{5}x - \frac{3}{4}\right) + \left(-\frac{1}{3}x - \frac{5}{4}\right) \\
&= \frac{2}{5}x - \frac{3}{4} - \frac{1}{3}x - \frac{5}{4} \\
&= \left(\frac{2}{5} - \frac{1}{3}\right)x - \frac{3}{4} - \frac{5}{4} \\
&= \left(\frac{6}{15} - \frac{5}{15}\right)x - \frac{3}{4} - \frac{5}{4} \\
&= \frac{1}{15}x - \frac{8}{4} \\
&= \frac{1}{15}x - 2
\end{aligned}$$

3

$$\begin{aligned}
& \left(\frac{1}{7}x + \frac{3}{4}\right) - \left(-\frac{1}{6}x + \frac{4}{3}\right) \\
&= \left(\frac{1}{7}x + \frac{3}{4}\right) + \left(\frac{1}{6}x - \frac{4}{3}\right) \\
&= \frac{1}{7}x + \frac{3}{4} + \frac{1}{6}x - \frac{4}{3} \\
&= \left(\frac{1}{7} + \frac{1}{6}\right)x + \frac{3}{4} - \frac{4}{3} \\
&= \left(\frac{6}{42} + \frac{7}{42}\right)x + \frac{9}{12} - \frac{16}{12} \\
&= \frac{13}{42}x - \frac{7}{12}
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{4}{5}x - 6\right) + \left(\frac{1}{7}x - \frac{1}{8}\right) \\
&= \frac{4}{5}x - 6 + \frac{1}{7}x - \frac{1}{8} \\
&= \left(\frac{4}{5} + \frac{1}{7}\right)x - 6 - \frac{1}{8} \\
&= \left(\frac{28}{35} + \frac{5}{35}\right)x - \frac{48}{8} - \frac{1}{8} \\
&= \frac{33}{35}x - \frac{49}{8}
\end{aligned}$$

①

$$\left(-\frac{5}{4}x - \frac{1}{4}\right) - \left(\frac{1}{8}x - \frac{5}{4}\right)$$

②

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

③

$$\left(\frac{1}{8}x - 6\right) + \left(\frac{1}{4}x + \frac{4}{5}\right)$$

④

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

1

$$\begin{aligned}
& \left(-\frac{5}{4}x - \frac{1}{4}\right) - \left(\frac{1}{8}x - \frac{5}{4}\right) \\
&= \left(-\frac{5}{4}x - \frac{1}{4}\right) + \left(-\frac{1}{8}x + \frac{5}{4}\right) \\
&= -\frac{5}{4}x - \frac{1}{4} - \frac{1}{8}x + \frac{5}{4} \\
&= \left(-\frac{5}{4} - \frac{1}{8}\right)x - \frac{1}{4} + \frac{5}{4} \\
&= \left(-\frac{10}{8} - \frac{1}{8}\right)x - \frac{1}{4} + \frac{5}{4} \\
&= -\frac{11}{8}x + \frac{4}{4} \\
&= -\frac{11}{8}x + 1
\end{aligned}$$

2

$$\begin{aligned}
& \left(\frac{3}{7}x + 7\right) + \left(\frac{2}{5}x + \frac{3}{2}\right) \\
&= \frac{3}{7}x + 7 + \frac{2}{5}x + \frac{3}{2} \\
&= \left(\frac{3}{7} + \frac{2}{5}\right)x + 7 + \frac{3}{2} \\
&= \left(\frac{15}{35} + \frac{14}{35}\right)x + \frac{14}{2} + \frac{3}{2} \\
&= \frac{29}{35}x + \frac{17}{2}
\end{aligned}$$

3

$$\begin{aligned}
& \left(\frac{1}{8}x - 6\right) + \left(\frac{1}{4}x + \frac{4}{5}\right) \\
&= \frac{1}{8}x - 6 + \frac{1}{4}x + \frac{4}{5} \\
&= \left(\frac{1}{8} + \frac{1}{4}\right)x - 6 + \frac{4}{5} \\
&= \left(\frac{1}{8} + \frac{2}{8}\right)x - \frac{30}{5} + \frac{4}{5} \\
&= \frac{3}{8}x - \frac{26}{5}
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{4}{3}x + \frac{5}{6}\right) + \left(\frac{1}{4}x - 7\right) \\
&= \frac{4}{3}x + \frac{5}{6} + \frac{1}{4}x - 7 \\
&= \left(\frac{4}{3} + \frac{1}{4}\right)x + \frac{5}{6} - 7 \\
&= \left(\frac{16}{12} + \frac{3}{12}\right)x + \frac{5}{6} - \frac{42}{6} \\
&= \frac{19}{12}x - \frac{37}{6}
\end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
& \left(-\frac{2}{3}x - 5\right) - \left(-\frac{3}{7}x + \frac{3}{7}\right) \\
&= \left(-\frac{2}{3}x - 5\right) + \left(\frac{3}{7}x - \frac{3}{7}\right) \\
&= -\frac{2}{3}x - 5 + \frac{3}{7}x - \frac{3}{7} \\
&= \left(-\frac{2}{3} + \frac{3}{7}\right)x - 5 - \frac{3}{7} \\
&= \left(-\frac{14}{21} + \frac{9}{21}\right)x - \frac{35}{7} - \frac{3}{7} \\
&= -\frac{5}{21}x - \frac{38}{7}
\end{aligned}$$

2

$$\begin{aligned}
& \left(-\frac{4}{7}x - \frac{5}{6}\right) + \left(\frac{2}{7}x - \frac{6}{5}\right) \\
&= -\frac{4}{7}x - \frac{5}{6} + \frac{2}{7}x - \frac{6}{5} \\
&= \left(-\frac{4}{7} + \frac{2}{7}\right)x - \frac{5}{6} - \frac{6}{5} \\
&= \left(-\frac{4}{7} + \frac{2}{7}\right)x - \frac{25}{30} - \frac{36}{30} \\
&= -\frac{2}{7}x - \frac{61}{30}
\end{aligned}$$

3

$$\begin{aligned}
& \left(-\frac{1}{4}x + 5\right) + \left(-\frac{5}{4}x - \frac{4}{7}\right) \\
&= -\frac{1}{4}x + 5 - \frac{5}{4}x - \frac{4}{7} \\
&= \left(-\frac{1}{4} - \frac{5}{4}\right)x + 5 - \frac{4}{7} \\
&= \left(-\frac{1}{4} - \frac{5}{4}\right)x + \frac{35}{7} - \frac{4}{7} \\
&= -\frac{6}{4}x + \frac{31}{7} \\
&= -\frac{3}{2}x + \frac{31}{7}
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{5}{6}x - \frac{5}{3}\right) - \left(\frac{3}{2}x - \frac{5}{4}\right) \\
&= \left(\frac{5}{6}x - \frac{5}{3}\right) + \left(-\frac{3}{2}x + \frac{5}{4}\right) \\
&= \frac{5}{6}x - \frac{5}{3} - \frac{3}{2}x + \frac{5}{4} \\
&= \left(\frac{5}{6} - \frac{3}{2}\right)x - \frac{5}{3} + \frac{5}{4} \\
&= \left(\frac{5}{6} - \frac{9}{6}\right)x - \frac{20}{12} + \frac{15}{12} \\
&= -\frac{4}{6}x - \frac{5}{12} \\
&= -\frac{2}{3}x - \frac{5}{12}
\end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
 & \left(-\frac{3}{4}x - \frac{1}{6}\right) + \left(-\frac{5}{4}x - \frac{3}{2}\right) \\
 &= -\frac{3}{4}x - \frac{1}{6} - \frac{5}{4}x - \frac{3}{2} \\
 &= \left(-\frac{3}{4} - \frac{5}{4}\right)x - \frac{1}{6} - \frac{3}{2} \\
 &= \left(-\frac{3}{4} - \frac{5}{4}\right)x - \frac{1}{6} - \frac{9}{6} \\
 &= -\frac{8}{4}x - \frac{10}{6} \\
 &= -2x - \frac{5}{3}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(-\frac{4}{5}x + \frac{6}{7}\right) + \left(-\frac{1}{4}x + \frac{3}{7}\right) \\
 &= -\frac{4}{5}x + \frac{6}{7} - \frac{1}{4}x + \frac{3}{7} \\
 &= \left(-\frac{4}{5} - \frac{1}{4}\right)x + \frac{6}{7} + \frac{3}{7} \\
 &= \left(-\frac{16}{20} - \frac{5}{20}\right)x + \frac{6}{7} + \frac{3}{7} \\
 &= -\frac{21}{20}x + \frac{9}{7}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{2}{7}x - \frac{1}{5}\right) - \left(\frac{4}{3}x - \frac{1}{6}\right) \\
 &= \left(\frac{2}{7}x - \frac{1}{5}\right) + \left(-\frac{4}{3}x + \frac{1}{6}\right) \\
 &= \frac{2}{7}x - \frac{1}{5} - \frac{4}{3}x + \frac{1}{6} \\
 &= \left(\frac{2}{7} - \frac{4}{3}\right)x - \frac{1}{5} + \frac{1}{6} \\
 &= \left(\frac{6}{21} - \frac{28}{21}\right)x - \frac{6}{30} + \frac{5}{30} \\
 &= -\frac{22}{21}x - \frac{1}{30}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{1}{6}x + \frac{5}{6}\right) + \left(-\frac{5}{2}x - \frac{5}{3}\right) \\
 &= \frac{1}{6}x + \frac{5}{6} - \frac{5}{2}x - \frac{5}{3} \\
 &= \left(\frac{1}{6} - \frac{5}{2}\right)x + \frac{5}{6} - \frac{5}{3} \\
 &= \left(\frac{1}{6} - \frac{15}{6}\right)x + \frac{5}{6} - \frac{10}{6} \\
 &= -\frac{14}{6}x - \frac{5}{6} \\
 &= -\frac{7}{3}x - \frac{5}{6}
 \end{aligned}$$



①

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

②

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

③

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

④

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

1

$$\begin{aligned}
 & \left(-\frac{2}{7}x + \frac{3}{5}\right) + \left(-\frac{5}{2}x - 2\right) \\
 &= -\frac{2}{7}x + \frac{3}{5} - \frac{5}{2}x - 2 \\
 &= \left(-\frac{2}{7} - \frac{5}{2}\right)x + \frac{3}{5} - 2 \\
 &= \left(-\frac{4}{14} - \frac{35}{14}\right)x + \frac{3}{5} - \frac{10}{5} \\
 &= -\frac{39}{14}x - \frac{7}{5}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{3}{4}x - \frac{2}{3}\right) - \left(\frac{3}{7}x - \frac{5}{4}\right) \\
 &= \left(\frac{3}{4}x - \frac{2}{3}\right) + \left(-\frac{3}{7}x + \frac{5}{4}\right) \\
 &= \frac{3}{4}x - \frac{2}{3} - \frac{3}{7}x + \frac{5}{4} \\
 &= \left(\frac{3}{4} - \frac{3}{7}\right)x - \frac{2}{3} + \frac{5}{4} \\
 &= \left(\frac{21}{28} - \frac{12}{28}\right)x - \frac{8}{12} + \frac{15}{12} \\
 &= \frac{9}{28}x + \frac{7}{12}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{5}{7}x - \frac{3}{8}\right) - \left(\frac{1}{3}x - \frac{3}{2}\right) \\
 &= \left(\frac{5}{7}x - \frac{3}{8}\right) + \left(-\frac{1}{3}x + \frac{3}{2}\right) \\
 &= \frac{5}{7}x - \frac{3}{8} - \frac{1}{3}x + \frac{3}{2} \\
 &= \left(\frac{5}{7} - \frac{1}{3}\right)x - \frac{3}{8} + \frac{3}{2} \\
 &= \left(\frac{15}{21} - \frac{7}{21}\right)x - \frac{3}{8} + \frac{12}{8} \\
 &= \frac{8}{21}x + \frac{9}{8}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{1}{8}x - \frac{1}{7}\right) - \left(-\frac{1}{8}x + \frac{3}{4}\right) \\
 &= \left(\frac{1}{8}x - \frac{1}{7}\right) + \left(\frac{1}{8}x - \frac{3}{4}\right) \\
 &= \frac{1}{8}x - \frac{1}{7} + \frac{1}{8}x - \frac{3}{4} \\
 &= \left(\frac{1}{8} + \frac{1}{8}\right)x - \frac{1}{7} - \frac{3}{4} \\
 &= \left(\frac{1}{8} + \frac{1}{8}\right)x - \frac{4}{28} - \frac{21}{28} \\
 &= \frac{2}{8}x - \frac{25}{28} \\
 &= \frac{1}{4}x - \frac{25}{28}
 \end{aligned}$$

①

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

②

$$\left(\frac{5}{6}x + \frac{1}{8}\right) - \left(-\frac{2}{5}x - 2\right)$$

③

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

④

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

1

$$\begin{aligned}
 & \left(\frac{1}{5}x - \frac{2}{3}\right) - \left(-\frac{2}{7}x + \frac{3}{5}\right) \\
 &= \left(\frac{1}{5}x - \frac{2}{3}\right) + \left(\frac{2}{7}x - \frac{3}{5}\right) \\
 &= \frac{1}{5}x - \frac{2}{3} + \frac{2}{7}x - \frac{3}{5} \\
 &= \left(\frac{1}{5} + \frac{2}{7}\right)x - \frac{2}{3} - \frac{3}{5} \\
 &= \left(\frac{7}{35} + \frac{10}{35}\right)x - \frac{10}{15} - \frac{9}{15} \\
 &= \frac{17}{35}x - \frac{19}{15}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{5}{6}x + \frac{1}{8}\right) - \left(-\frac{2}{5}x - 2\right) \\
 &= \left(\frac{5}{6}x + \frac{1}{8}\right) + \left(\frac{2}{5}x + 2\right) \\
 &= \frac{5}{6}x + \frac{1}{8} + \frac{2}{5}x + 2 \\
 &= \left(\frac{5}{6} + \frac{2}{5}\right)x + \frac{1}{8} + 2 \\
 &= \left(\frac{25}{30} + \frac{12}{30}\right)x + \frac{1}{8} + \frac{16}{8} \\
 &= \frac{37}{30}x + \frac{17}{8}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{6}{7}x + 6\right) + \left(-\frac{5}{6}x - \frac{1}{6}\right) \\
 &= \frac{6}{7}x + 6 - \frac{5}{6}x - \frac{1}{6} \\
 &= \left(\frac{6}{7} - \frac{5}{6}\right)x + 6 - \frac{1}{6} \\
 &= \left(\frac{36}{42} - \frac{35}{42}\right)x + \frac{36}{6} - \frac{1}{6} \\
 &= \frac{1}{42}x + \frac{35}{6}
 \end{aligned}$$

4

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

①

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

②

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

③

$$\left(-\frac{1}{7}x - \frac{1}{6}\right) - \left(-\frac{5}{8}x + \frac{1}{6}\right)$$

④

$$\left(-\frac{3}{8}x - 2\right) - \left(\frac{1}{6}x + \frac{1}{5}\right)$$

1

$$\begin{aligned}
 & \left(\frac{4}{3}x + \frac{1}{7}\right) - \left(-\frac{1}{5}x - \frac{3}{5}\right) \\
 = & \left(\frac{4}{3}x + \frac{1}{7}\right) + \left(\frac{1}{5}x + \frac{3}{5}\right) \\
 = & \frac{4}{3}x + \frac{1}{7} + \frac{1}{5}x + \frac{3}{5} \\
 = & \left(\frac{4}{3} + \frac{1}{5}\right)x + \frac{1}{7} + \frac{3}{5} \\
 = & \left(\frac{20}{15} + \frac{3}{15}\right)x + \frac{5}{35} + \frac{21}{35} \\
 = & \frac{23}{15}x + \frac{26}{35}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(-\frac{3}{7}x - \frac{6}{5}\right) + \left(-\frac{2}{7}x - \frac{4}{3}\right) \\
 = & -\frac{3}{7}x - \frac{6}{5} - \frac{2}{7}x - \frac{4}{3} \\
 = & \left(-\frac{3}{7} - \frac{2}{7}\right)x - \frac{6}{5} - \frac{4}{3} \\
 = & \left(-\frac{3}{7} - \frac{2}{7}\right)x - \frac{18}{15} - \frac{20}{15} \\
 = & -\frac{5}{7}x - \frac{38}{15}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(-\frac{1}{7}x - \frac{1}{6}\right) - \left(-\frac{5}{8}x + \frac{1}{6}\right) \\
 = & \left(-\frac{1}{7}x - \frac{1}{6}\right) + \left(\frac{5}{8}x - \frac{1}{6}\right) \\
 = & -\frac{1}{7}x - \frac{1}{6} + \frac{5}{8}x - \frac{1}{6} \\
 = & \left(-\frac{1}{7} + \frac{5}{8}\right)x - \frac{1}{6} - \frac{1}{6} \\
 = & \left(-\frac{8}{56} + \frac{35}{56}\right)x - \frac{1}{6} - \frac{1}{6} \\
 = & \frac{27}{56}x - \frac{2}{6} \\
 = & \frac{27}{56}x - \frac{1}{3}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(-\frac{3}{8}x - 2\right) - \left(\frac{1}{6}x + \frac{1}{5}\right) \\
 = & \left(-\frac{3}{8}x - 2\right) + \left(-\frac{1}{6}x - \frac{1}{5}\right) \\
 = & -\frac{3}{8}x - 2 - \frac{1}{6}x - \frac{1}{5} \\
 = & \left(-\frac{3}{8} - \frac{1}{6}\right)x - 2 - \frac{1}{5} \\
 = & \left(-\frac{9}{24} - \frac{4}{24}\right)x - \frac{10}{5} - \frac{1}{5} \\
 = & -\frac{13}{24}x - \frac{11}{5}
 \end{aligned}$$

①

$$\left(-\frac{1}{5}x + \frac{2}{5}\right) - \left(\frac{2}{5}x - \frac{1}{8}\right)$$

②

$$\left(-\frac{4}{3}x + \frac{6}{7}\right) + \left(-\frac{2}{7}x + \frac{3}{8}\right)$$

③

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

④

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

1

$$\begin{aligned}
 & \left(-\frac{1}{5}x + \frac{2}{5}\right) - \left(\frac{2}{5}x - \frac{1}{8}\right) \\
 &= \left(-\frac{1}{5}x + \frac{2}{5}\right) + \left(-\frac{2}{5}x + \frac{1}{8}\right) \\
 &= -\frac{1}{5}x + \frac{2}{5} - \frac{2}{5}x + \frac{1}{8} \\
 &= \left(-\frac{1}{5} - \frac{2}{5}\right)x + \frac{2}{5} + \frac{1}{8} \\
 &= \left(-\frac{1}{5} - \frac{2}{5}\right)x + \frac{16}{40} + \frac{5}{40} \\
 &= -\frac{3}{5}x + \frac{21}{40}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(-\frac{4}{3}x + \frac{6}{7}\right) + \left(-\frac{2}{7}x + \frac{3}{8}\right) \\
 &= -\frac{4}{3}x + \frac{6}{7} - \frac{2}{7}x + \frac{3}{8} \\
 &= \left(-\frac{4}{3} - \frac{2}{7}\right)x + \frac{6}{7} + \frac{3}{8} \\
 &= \left(-\frac{28}{21} - \frac{6}{21}\right)x + \frac{48}{56} + \frac{21}{56} \\
 &= -\frac{34}{21}x + \frac{69}{56}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{5}{3}x - 7\right) - \left(-\frac{5}{2}x - 2\right) \\
 &= \left(\frac{5}{3}x - 7\right) + \left(\frac{5}{2}x + 2\right) \\
 &= \frac{5}{3}x - 7 + \frac{5}{2}x + 2 \\
 &= \left(\frac{5}{3} + \frac{5}{2}\right)x - 7 + 2 \\
 &= \left(\frac{10}{6} + \frac{15}{6}\right)x - 7 + 2 \\
 &= \frac{25}{6}x - 5
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{4}{3}x - \frac{2}{3}\right) + \left(\frac{5}{4}x - \frac{1}{3}\right) \\
 &= \frac{4}{3}x - \frac{2}{3} + \frac{5}{4}x - \frac{1}{3} \\
 &= \left(\frac{4}{3} + \frac{5}{4}\right)x - \frac{2}{3} - \frac{1}{3} \\
 &= \left(\frac{16}{12} + \frac{15}{12}\right)x - \frac{2}{3} - \frac{1}{3} \\
 &= \frac{31}{12}x - \frac{3}{3} \\
 &= \frac{31}{12}x - 1
 \end{aligned}$$



①

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

②

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

③

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

④

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

1

$$\begin{aligned}
& \left(-\frac{5}{2}x + \frac{6}{7}\right) - \left(\frac{3}{7}x + \frac{1}{2}\right) \\
&= \left(-\frac{5}{2}x + \frac{6}{7}\right) + \left(-\frac{3}{7}x - \frac{1}{2}\right) \\
&= -\frac{5}{2}x + \frac{6}{7} - \frac{3}{7}x - \frac{1}{2} \\
&= \left(-\frac{5}{2} - \frac{3}{7}\right)x + \frac{6}{7} - \frac{1}{2} \\
&= \left(-\frac{35}{14} - \frac{6}{14}\right)x + \frac{12}{14} - \frac{7}{14} \\
&= -\frac{41}{14}x + \frac{5}{14}
\end{aligned}$$

2

$$\begin{aligned}
& \left(-\frac{5}{2}x - \frac{1}{5}\right) - \left(-\frac{2}{7}x + \frac{6}{7}\right) \\
&= \left(-\frac{5}{2}x - \frac{1}{5}\right) + \left(\frac{2}{7}x - \frac{6}{7}\right) \\
&= -\frac{5}{2}x - \frac{1}{5} + \frac{2}{7}x - \frac{6}{7} \\
&= \left(-\frac{5}{2} + \frac{2}{7}\right)x - \frac{1}{5} - \frac{6}{7} \\
&= \left(-\frac{35}{14} + \frac{4}{14}\right)x - \frac{7}{35} - \frac{30}{35} \\
&= -\frac{31}{14}x - \frac{37}{35}
\end{aligned}$$

3

$$\begin{aligned}
& \left(-\frac{4}{3}x + \frac{4}{3}\right) + \left(-\frac{3}{4}x + \frac{5}{3}\right) \\
&= -\frac{4}{3}x + \frac{4}{3} - \frac{3}{4}x + \frac{5}{3} \\
&= \left(-\frac{4}{3} - \frac{3}{4}\right)x + \frac{4}{3} + \frac{5}{3} \\
&= \left(-\frac{16}{12} - \frac{9}{12}\right)x + \frac{4}{3} + \frac{5}{3} \\
&= -\frac{25}{12}x + \frac{9}{3} \\
&= -\frac{25}{12}x + 3
\end{aligned}$$

4

$$\begin{aligned}
& \left(\frac{5}{6}x - \frac{4}{5}\right) - \left(-\frac{6}{7}x - \frac{5}{7}\right) \\
&= \left(\frac{5}{6}x - \frac{4}{5}\right) + \left(\frac{6}{7}x + \frac{5}{7}\right) \\
&= \frac{5}{6}x - \frac{4}{5} + \frac{6}{7}x + \frac{5}{7} \\
&= \left(\frac{5}{6} + \frac{6}{7}\right)x - \frac{4}{5} + \frac{5}{7} \\
&= \left(\frac{35}{42} + \frac{36}{42}\right)x - \frac{28}{35} + \frac{25}{35} \\
&= \frac{71}{42}x - \frac{3}{35}
\end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
 & \left(\frac{3}{4}x + \frac{5}{3}\right) - \left(\frac{4}{7}x - \frac{1}{5}\right) \\
 &= \left(\frac{3}{4}x + \frac{5}{3}\right) + \left(-\frac{4}{7}x + \frac{1}{5}\right) \\
 &= \frac{3}{4}x + \frac{5}{3} - \frac{4}{7}x + \frac{1}{5} \\
 &= \left(\frac{3}{4} - \frac{4}{7}\right)x + \frac{5}{3} + \frac{1}{5} \\
 &= \left(\frac{21}{28} - \frac{16}{28}\right)x + \frac{25}{15} + \frac{3}{15} \\
 &= \frac{5}{28}x + \frac{28}{15}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{1}{6}x - \frac{1}{2}\right) + \left(-\frac{1}{8}x - \frac{1}{6}\right) \\
 &= \frac{1}{6}x - \frac{1}{2} - \frac{1}{8}x - \frac{1}{6} \\
 &= \left(\frac{1}{6} - \frac{1}{8}\right)x - \frac{1}{2} - \frac{1}{6} \\
 &= \left(\frac{4}{24} - \frac{3}{24}\right)x - \frac{3}{6} - \frac{1}{6} \\
 &= \frac{1}{24}x - \frac{4}{6} \\
 &= \frac{1}{24}x - \frac{2}{3}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(-\frac{3}{4}x + 7\right) - \left(-\frac{1}{2}x - \frac{1}{8}\right) \\
 &= \left(-\frac{3}{4}x + 7\right) + \left(\frac{1}{2}x + \frac{1}{8}\right) \\
 &= -\frac{3}{4}x + 7 + \frac{1}{2}x + \frac{1}{8} \\
 &= \left(-\frac{3}{4} + \frac{1}{2}\right)x + 7 + \frac{1}{8} \\
 &= \left(-\frac{3}{4} + \frac{2}{4}\right)x + \frac{56}{8} + \frac{1}{8} \\
 &= -\frac{1}{4}x + \frac{57}{8}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{2}{5}x - \frac{1}{2}\right) - \left(-\frac{3}{5}x - \frac{1}{3}\right) \\
 &= \left(\frac{2}{5}x - \frac{1}{2}\right) + \left(\frac{3}{5}x + \frac{1}{3}\right) \\
 &= \frac{2}{5}x - \frac{1}{2} + \frac{3}{5}x + \frac{1}{3} \\
 &= \left(\frac{2}{5} + \frac{3}{5}\right)x - \frac{1}{2} + \frac{1}{3} \\
 &= \left(\frac{2}{5} + \frac{3}{5}\right)x - \frac{3}{6} + \frac{2}{6} \\
 &= \frac{5}{5}x - \frac{1}{6} \\
 &= x - \frac{1}{6}
 \end{aligned}$$

①

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

②

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

③

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

④

$$\left(\frac{1}{5}x + \frac{2}{3}\right) + \left(\frac{5}{8}x + \frac{1}{3}\right)$$

1

$$\begin{aligned}
 & \left(-\frac{1}{4}x + 2\right) - \left(-\frac{2}{7}x - 6\right) \\
 = & \left(-\frac{1}{4}x + 2\right) + \left(\frac{2}{7}x + 6\right) \\
 = & -\frac{1}{4}x + 2 + \frac{2}{7}x + 6 \\
 = & \left(-\frac{1}{4} + \frac{2}{7}\right)x + 2 + 6 \\
 = & \left(-\frac{7}{28} + \frac{8}{28}\right)x + 2 + 6 \\
 = & \frac{1}{28}x + 8
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(-\frac{5}{7}x + 2\right) + \left(-\frac{2}{5}x - \frac{1}{4}\right) \\
 = & -\frac{5}{7}x + 2 - \frac{2}{5}x - \frac{1}{4} \\
 = & \left(-\frac{5}{7} - \frac{2}{5}\right)x + 2 - \frac{1}{4} \\
 = & \left(-\frac{25}{35} - \frac{14}{35}\right)x + \frac{8}{4} - \frac{1}{4} \\
 = & -\frac{39}{35}x + \frac{7}{4}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{6}{5}x + \frac{1}{6}\right) - \left(-\frac{1}{6}x + \frac{4}{5}\right) \\
 = & \left(\frac{6}{5}x + \frac{1}{6}\right) + \left(\frac{1}{6}x - \frac{4}{5}\right) \\
 = & \frac{6}{5}x + \frac{1}{6} + \frac{1}{6}x - \frac{4}{5} \\
 = & \left(\frac{6}{5} + \frac{1}{6}\right)x + \frac{1}{6} - \frac{4}{5} \\
 = & \left(\frac{36}{30} + \frac{5}{30}\right)x + \frac{5}{30} - \frac{24}{30} \\
 = & \frac{41}{30}x - \frac{19}{30}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{1}{5}x + \frac{2}{3}\right) + \left(\frac{5}{8}x + \frac{1}{3}\right) \\
 = & \frac{1}{5}x + \frac{2}{3} + \frac{5}{8}x + \frac{1}{3} \\
 = & \left(\frac{1}{5} + \frac{5}{8}\right)x + \frac{2}{3} + \frac{1}{3} \\
 = & \left(\frac{8}{40} + \frac{25}{40}\right)x + \frac{2}{3} + \frac{1}{3} \\
 = & \frac{33}{40}x + \frac{3}{3} \\
 = & \frac{33}{40}x + 1
 \end{aligned}$$

①

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

②

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

③

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

④

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

1

$$\begin{aligned}
 & \left(-\frac{2}{5}x - 3\right) + \left(\frac{2}{7}x + 6\right) \\
 &= -\frac{2}{5}x - 3 + \frac{2}{7}x + 6 \\
 &= \left(-\frac{2}{5} + \frac{2}{7}\right)x - 3 + 6 \\
 &= \left(-\frac{14}{35} + \frac{10}{35}\right)x - 3 + 6 \\
 &= -\frac{4}{35}x + 3
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{1}{5}x + 4\right) + \left(-\frac{4}{3}x - 6\right) \\
 &= \frac{1}{5}x + 4 - \frac{4}{3}x - 6 \\
 &= \left(\frac{1}{5} - \frac{4}{3}\right)x + 4 - 6 \\
 &= \left(\frac{3}{15} - \frac{20}{15}\right)x + 4 - 6 \\
 &= -\frac{17}{15}x - 2
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{5}{7}x + \frac{3}{4}\right) - \left(\frac{5}{2}x - 6\right) \\
 &= \left(\frac{5}{7}x + \frac{3}{4}\right) + \left(-\frac{5}{2}x + 6\right) \\
 &= \frac{5}{7}x + \frac{3}{4} - \frac{5}{2}x + 6 \\
 &= \left(\frac{5}{7} - \frac{5}{2}\right)x + \frac{3}{4} + 6 \\
 &= \left(\frac{10}{14} - \frac{35}{14}\right)x + \frac{3}{4} + \frac{24}{4} \\
 &= -\frac{25}{14}x + \frac{27}{4}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(\frac{3}{7}x + \frac{1}{5}\right) - \left(-\frac{1}{7}x + \frac{2}{3}\right) \\
 &= \left(\frac{3}{7}x + \frac{1}{5}\right) + \left(\frac{1}{7}x - \frac{2}{3}\right) \\
 &= \frac{3}{7}x + \frac{1}{5} + \frac{1}{7}x - \frac{2}{3} \\
 &= \left(\frac{3}{7} + \frac{1}{7}\right)x + \frac{1}{5} - \frac{2}{3} \\
 &= \left(\frac{3}{7} + \frac{1}{7}\right)x + \frac{3}{15} - \frac{10}{15} \\
 &= \frac{4}{7}x - \frac{7}{15}
 \end{aligned}$$



①

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

②

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

③

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

④

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

1

$$\begin{aligned}
& \left(-\frac{2}{3}x + \frac{3}{2}\right) + \left(\frac{3}{5}x - \frac{6}{7}\right) \\
&= -\frac{2}{3}x + \frac{3}{2} + \frac{3}{5}x - \frac{6}{7} \\
&= \left(-\frac{2}{3} + \frac{3}{5}\right)x + \frac{3}{2} - \frac{6}{7} \\
&= \left(-\frac{10}{15} + \frac{9}{15}\right)x + \frac{21}{14} - \frac{12}{14} \\
&= -\frac{1}{15}x + \frac{9}{14}
\end{aligned}$$

2

$$\begin{aligned}
& \left(\frac{5}{6}x + \frac{4}{5}\right) - \left(-\frac{6}{7}x + \frac{5}{7}\right) \\
&= \left(\frac{5}{6}x + \frac{4}{5}\right) + \left(\frac{6}{7}x - \frac{5}{7}\right) \\
&= \frac{5}{6}x + \frac{4}{5} + \frac{6}{7}x - \frac{5}{7} \\
&= \left(\frac{5}{6} + \frac{6}{7}\right)x + \frac{4}{5} - \frac{5}{7} \\
&= \left(\frac{35}{42} + \frac{36}{42}\right)x + \frac{28}{35} - \frac{25}{35} \\
&= \frac{71}{42}x + \frac{3}{35}
\end{aligned}$$

3

$$\begin{aligned}
& \left(-\frac{5}{7}x - \frac{3}{2}\right) + \left(-\frac{2}{5}x - 2\right) \\
&= -\frac{5}{7}x - \frac{3}{2} - \frac{2}{5}x - 2 \\
&= \left(-\frac{5}{7} - \frac{2}{5}\right)x - \frac{3}{2} - 2 \\
&= \left(-\frac{25}{35} - \frac{14}{35}\right)x - \frac{3}{2} - \frac{4}{2} \\
&= -\frac{39}{35}x - \frac{7}{2}
\end{aligned}$$

4

$$\begin{aligned}
& \left(-\frac{5}{4}x + 5\right) + \left(\frac{3}{5}x + \frac{5}{7}\right) \\
&= -\frac{5}{4}x + 5 + \frac{3}{5}x + \frac{5}{7} \\
&= \left(-\frac{5}{4} + \frac{3}{5}\right)x + 5 + \frac{5}{7} \\
&= \left(-\frac{25}{20} + \frac{12}{20}\right)x + \frac{35}{7} + \frac{5}{7} \\
&= -\frac{13}{20}x + \frac{40}{7}
\end{aligned}$$

①

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

②

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

③

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

④

$$\left(-\frac{6}{7}x - \frac{1}{8}\right) - \left(\frac{4}{7}x - \frac{3}{8}\right)$$

1

$$\begin{aligned}
 & \left(-\frac{3}{7}x - \frac{5}{2}\right) - \left(\frac{5}{6}x + 6\right) \\
 = & \left(-\frac{3}{7}x - \frac{5}{2}\right) + \left(-\frac{5}{6}x - 6\right) \\
 = & -\frac{3}{7}x - \frac{5}{2} - \frac{5}{6}x - 6 \\
 = & \left(-\frac{3}{7} - \frac{5}{6}\right)x - \frac{5}{2} - 6 \\
 = & \left(-\frac{18}{42} - \frac{35}{42}\right)x - \frac{5}{2} - \frac{12}{2} \\
 = & -\frac{53}{42}x - \frac{17}{2}
 \end{aligned}$$

2

$$\begin{aligned}
 & \left(\frac{2}{3}x - \frac{3}{2}\right) + \left(\frac{3}{5}x - \frac{6}{7}\right) \\
 = & \frac{2}{3}x - \frac{3}{2} + \frac{3}{5}x - \frac{6}{7} \\
 = & \left(\frac{2}{3} + \frac{3}{5}\right)x - \frac{3}{2} - \frac{6}{7} \\
 = & \left(\frac{10}{15} + \frac{9}{15}\right)x - \frac{21}{14} - \frac{12}{14} \\
 = & \frac{19}{15}x - \frac{33}{14}
 \end{aligned}$$

3

$$\begin{aligned}
 & \left(\frac{5}{7}x + \frac{2}{5}\right) + \left(-\frac{2}{3}x - \frac{5}{7}\right) \\
 = & \frac{5}{7}x + \frac{2}{5} - \frac{2}{3}x - \frac{5}{7} \\
 = & \left(\frac{5}{7} - \frac{2}{3}\right)x + \frac{2}{5} - \frac{5}{7} \\
 = & \left(\frac{15}{21} - \frac{14}{21}\right)x + \frac{14}{35} - \frac{25}{35} \\
 = & \frac{1}{21}x - \frac{11}{35}
 \end{aligned}$$

4

$$\begin{aligned}
 & \left(-\frac{6}{7}x - \frac{1}{8}\right) - \left(\frac{4}{7}x - \frac{3}{8}\right) \\
 = & \left(-\frac{6}{7}x - \frac{1}{8}\right) + \left(-\frac{4}{7}x + \frac{3}{8}\right) \\
 = & -\frac{6}{7}x - \frac{1}{8} - \frac{4}{7}x + \frac{3}{8} \\
 = & \left(-\frac{6}{7} - \frac{4}{7}\right)x - \frac{1}{8} + \frac{3}{8} \\
 = & -\frac{10}{7}x + \frac{2}{8} \\
 = & -\frac{10}{7}x + \frac{1}{4}
 \end{aligned}$$

問題

次の計算をしましょう。

①

$$\frac{-7x-4}{6} \times 18$$

②

$$-42 \times \frac{9x-1}{6}$$

③

$$\frac{4x-7}{4} \times 32$$

④

$$\frac{-2x-2}{5} \times (-5)$$

⑤

$$\frac{-8x+9}{8} \times 56$$

⑥

$$-25 \times \frac{-2x-3}{5}$$

1

$$\begin{aligned}\frac{-7x-4}{6} \times 18 &= \frac{(-7x-4) \times 18}{6} \\ &= (-7x-4) \times 3 \\ &= -7x \times 3 - 4 \times 3 \\ &= -21x - 12\end{aligned}$$

2

$$\begin{aligned}-42 \times \frac{9x-1}{6} &= \frac{-42 \times (9x-1)}{6} \\ &= -7 \times (9x-1) \\ &= -7 \times 9x - 7 \times (-1) \\ &= -63x + 7\end{aligned}$$

3

$$\begin{aligned}\frac{4x-7}{4} \times 32 &= \frac{(4x-7) \times 32}{4} \\ &= (4x-7) \times 8 \\ &= 4x \times 8 - 7 \times 8 \\ &= 32x - 56\end{aligned}$$

4

$$\begin{aligned}\frac{-2x-2}{5} \times (-5) &= \frac{(-2x-2) \times (-5)}{5} \\ &= (-2x-2) \times (-1) \\ &= -2x \times (-1) - 2 \times (-1) \\ &= 2x + 2\end{aligned}$$

5

$$\begin{aligned}\frac{-8x+9}{8} \times 56 &= \frac{(-8x+9) \times 56}{8} \\ &= (-8x+9) \times 7 \\ &= -8x \times 7 + 9 \times 7 \\ &= -56x + 63\end{aligned}$$

6

$$\begin{aligned}-25 \times \frac{-2x-3}{5} &= \frac{-25 \times (-2x-3)}{5} \\ &= -5 \times (-2x-3) \\ &= -5 \times (-2x) - 5 \times (-3) \\ &= 10x + 15\end{aligned}$$

①

$$54 \times \frac{-8x - 1}{6}$$

②

$$\frac{2x - 1}{2} \times 14$$

③

$$9 \times \frac{-2x + 7}{3}$$

④

$$-10 \times \frac{-5x + 3}{5}$$

⑤

$$\frac{-3x + 4}{2} \times (-14)$$

⑥

$$\frac{8x - 9}{4} \times (-8)$$



1

$$\begin{aligned}
 & 54 \times \frac{-8x-1}{6} \\
 &= \frac{54 \times (-8x-1)}{6} \\
 &= 9 \times (-8x-1) \\
 &= 9 \times (-8x) + 9 \times (-1) \\
 &= -72x - 9
 \end{aligned}$$

2

$$\begin{aligned}
 \frac{2x-1}{2} \times 14 &= \frac{(2x-1) \times 14}{2} \\
 &= (2x-1) \times 7 \\
 &= 2x \times 7 - 1 \times 7 \\
 &= 14x - 7
 \end{aligned}$$

3

$$\begin{aligned}
 9 \times \frac{-2x+7}{3} &= \frac{9 \times (-2x+7)}{3} \\
 &= 3 \times (-2x+7) \\
 &= 3 \times (-2x) + 3 \times 7 \\
 &= -6x + 21
 \end{aligned}$$

4

$$\begin{aligned}
 -10 \times \frac{-5x+3}{5} \\
 &= \frac{-10 \times (-5x+3)}{5} \\
 &= -2 \times (-5x+3) \\
 &= -2 \times (-5x) - 2 \times 3 \\
 &= 10x - 6
 \end{aligned}$$

5

$$\begin{aligned}
 \frac{-3x+4}{2} \times (-14) \\
 &= \frac{(-3x+4) \times (-14)}{2} \\
 &= (-3x+4) \times (-7) \\
 &= -3x \times (-7) + 4 \times (-7) \\
 &= 21x - 28
 \end{aligned}$$

6

$$\begin{aligned}
 \frac{8x-9}{4} \times (-8) \\
 &= \frac{(8x-9) \times (-8)}{4} \\
 &= (8x-9) \times (-2) \\
 &= 8x \times (-2) - 9 \times (-2) \\
 &= -16x + 18
 \end{aligned}$$

①

$$-48 \times \frac{3x-5}{8}$$

②

$$10 \times \frac{-2x+3}{2}$$

③

$$\frac{7x+4}{2} \times (-12)$$

④

$$56 \times \frac{-2x+9}{7}$$

⑤

$$\frac{-6x+4}{7} \times (-63)$$

⑥

$$\frac{7x-2}{4} \times (-8)$$

1

$$\begin{aligned}
 & -48 \times \frac{3x-5}{8} \\
 = & \frac{-48 \times (3x-5)}{8} \\
 = & -6 \times (3x-5) \\
 = & -6 \times 3x - 6 \times (-5) \\
 = & -18x + 30
 \end{aligned}$$

2

$$\begin{aligned}
 10 \times \frac{-2x+3}{2} &= \frac{10 \times (-2x+3)}{2} \\
 &= 5 \times (-2x+3) \\
 &= 5 \times (-2x) + 5 \times 3 \\
 &= -10x + 15
 \end{aligned}$$

3

$$\begin{aligned}
 & \frac{7x+4}{2} \times (-12) \\
 = & \frac{(7x+4) \times (-12)}{2} \\
 = & (7x+4) \times (-6) \\
 = & 7x \times (-6) + 4 \times (-6) \\
 = & -42x - 24
 \end{aligned}$$

4

$$\begin{aligned}
 56 \times \frac{-2x+9}{7} &= \frac{56 \times (-2x+9)}{7} \\
 &= 8 \times (-2x+9) \\
 &= 8 \times (-2x) + 8 \times 9 \\
 &= -16x + 72
 \end{aligned}$$

5

$$\begin{aligned}
 & \frac{-6x+4}{7} \times (-63) \\
 = & \frac{(-6x+4) \times (-63)}{7} \\
 = & (-6x+4) \times (-9) \\
 = & -6x \times (-9) + 4 \times (-9) \\
 = & 54x - 36
 \end{aligned}$$

6

$$\begin{aligned}
 & \frac{7x-2}{4} \times (-8) \\
 = & \frac{(7x-2) \times (-8)}{4} \\
 = & (7x-2) \times (-2) \\
 = & 7x \times (-2) - 2 \times (-2) \\
 = & -14x + 4
 \end{aligned}$$

①

$$\frac{-7x+1}{7} \times (-14)$$

②

$$-4 \times \frac{-5x-5}{2}$$

③

$$-35 \times \frac{9x+7}{7}$$

④

$$48 \times \frac{-5x+1}{6}$$

⑤

$$\frac{8x-1}{3} \times (-9)$$

⑥

$$\frac{4x-3}{6} \times 42$$

1

$$\begin{aligned}
 & \frac{-7x+1}{7} \times (-14) \\
 = & \frac{(-7x+1) \times (-14)}{7} \\
 = & (-7x+1) \times (-2) \\
 = & -7x \times (-2) + 1 \times (-2) \\
 = & 14x - 2
 \end{aligned}$$

2

$$\begin{aligned}
 & -4 \times \frac{-5x-5}{2} \\
 = & \frac{-4 \times (-5x-5)}{2} \\
 = & -2 \times (-5x-5) \\
 = & -2 \times (-5x) - 2 \times (-5) \\
 = & 10x + 10
 \end{aligned}$$

3

$$\begin{aligned}
 -35 \times \frac{9x+7}{7} &= \frac{-35 \times (9x+7)}{7} \\
 &= -5 \times (9x+7) \\
 &= -5 \times 9x - 5 \times 7 \\
 &= -45x - 35
 \end{aligned}$$

4

$$\begin{aligned}
 48 \times \frac{-5x+1}{6} &= \frac{48 \times (-5x+1)}{6} \\
 &= 8 \times (-5x+1) \\
 &= 8 \times (-5x) + 8 \times 1 \\
 &= -40x + 8
 \end{aligned}$$

5

$$\begin{aligned}
 & \frac{8x-1}{3} \times (-9) \\
 = & \frac{(8x-1) \times (-9)}{3} \\
 = & (8x-1) \times (-3) \\
 = & 8x \times (-3) - 1 \times (-3) \\
 = & -24x + 3
 \end{aligned}$$

6

$$\begin{aligned}
 \frac{4x-3}{6} \times 42 &= \frac{(4x-3) \times 42}{6} \\
 &= (4x-3) \times 7 \\
 &= 4x \times 7 - 3 \times 7 \\
 &= 28x - 21
 \end{aligned}$$

①

$$\frac{9x-7}{4} \times 20$$

②

$$-12 \times \frac{6x-8}{3}$$

③

$$\frac{-9x-5}{6} \times (-12)$$

④

$$-49 \times \frac{-5x-7}{7}$$

⑤

$$\frac{-6x-9}{4} \times (-36)$$

⑥

$$\frac{-5x-7}{3} \times (-15)$$

1

$$\begin{aligned}\frac{9x-7}{4} \times 20 &= \frac{(9x-7) \times 20}{4} \\ &= (9x-7) \times 5 \\ &= 9x \times 5 - 7 \times 5 \\ &= 45x - 35\end{aligned}$$

2

$$\begin{aligned}-12 \times \frac{6x-8}{3} &= \frac{-12 \times (6x-8)}{3} \\ &= -4 \times (6x-8) \\ &= -4 \times 6x - 4 \times (-8) \\ &= -24x + 32\end{aligned}$$

3

$$\begin{aligned}\frac{-9x-5}{6} \times (-12) &= \frac{(-9x-5) \times (-12)}{6} \\ &= (-9x-5) \times (-2) \\ &= -9x \times (-2) - 5 \times (-2) \\ &= 18x + 10\end{aligned}$$

4

$$\begin{aligned}-49 \times \frac{-5x-7}{7} &= \frac{-49 \times (-5x-7)}{7} \\ &= -7 \times (-5x-7) \\ &= -7 \times (-5x) - 7 \times (-7) \\ &= 35x + 49\end{aligned}$$

5

$$\begin{aligned}\frac{-6x-9}{4} \times (-36) &= \frac{(-6x-9) \times (-36)}{4} \\ &= (-6x-9) \times (-9) \\ &= -6x \times (-9) - 9 \times (-9) \\ &= 54x + 81\end{aligned}$$

6

$$\begin{aligned}\frac{-5x-7}{3} \times (-15) &= \frac{(-5x-7) \times (-15)}{3} \\ &= (-5x-7) \times (-5) \\ &= -5x \times (-5) - 7 \times (-5) \\ &= 25x + 35\end{aligned}$$

①

$$\frac{-4x-9}{5} \times (-10)$$

②

$$-7 \times \frac{9x-4}{7}$$

③

$$\frac{-2x-8}{7} \times 42$$

④

$$12 \times \frac{5x-7}{4}$$

⑤

$$\frac{-8x-3}{8} \times 56$$

⑥

$$6 \times \frac{-4x-4}{3}$$



1

$$\begin{aligned}
 & \frac{-4x-9}{5} \times (-10) \\
 = & \frac{(-4x-9) \times (-10)}{5} \\
 = & (-4x-9) \times (-2) \\
 = & -4x \times (-2) - 9 \times (-2) \\
 = & 8x + 18
 \end{aligned}$$

2

$$\begin{aligned}
 & -7 \times \frac{9x-4}{7} \\
 = & \frac{-7 \times (9x-4)}{7} \\
 = & -1 \times (9x-4) \\
 = & -1 \times 9x - 1 \times (-4) \\
 = & -9x + 4
 \end{aligned}$$

3

$$\begin{aligned}
 \frac{-2x-8}{7} \times 42 &= \frac{(-2x-8) \times 42}{7} \\
 &= (-2x-8) \times 6 \\
 &= -2x \times 6 - 8 \times 6 \\
 &= -12x - 48
 \end{aligned}$$

4

$$\begin{aligned}
 12 \times \frac{5x-7}{4} &= \frac{12 \times (5x-7)}{4} \\
 &= 3 \times (5x-7) \\
 &= 3 \times 5x + 3 \times (-7) \\
 &= 15x - 21
 \end{aligned}$$

5

$$\begin{aligned}
 \frac{-8x-3}{8} \times 56 &= \frac{(-8x-3) \times 56}{8} \\
 &= (-8x-3) \times 7 \\
 &= -8x \times 7 - 3 \times 7 \\
 &= -56x - 21
 \end{aligned}$$

6

$$\begin{aligned}
 6 \times \frac{-4x-4}{3} \\
 = & \frac{6 \times (-4x-4)}{3} \\
 = & 2 \times (-4x-4) \\
 = & 2 \times (-4x) + 2 \times (-4) \\
 = & -8x - 8
 \end{aligned}$$

①

$$\frac{2x+5}{6} \times (-30)$$

②

$$15 \times \frac{-4x+9}{5}$$

③

$$35 \times \frac{7x-7}{5}$$

④

$$\frac{-3x+6}{7} \times (-42)$$

⑤

$$\frac{x+6}{3} \times 12$$

⑥

$$-6 \times \frac{7x-4}{2}$$

1

$$\begin{aligned}
 & \frac{2x+5}{6} \times (-30) \\
 &= \frac{(2x+5) \times (-30)}{6} \\
 &= (2x+5) \times (-5) \\
 &= 2x \times (-5) + 5 \times (-5) \\
 &= -10x - 25
 \end{aligned}$$

2

$$\begin{aligned}
 15 \times \frac{-4x+9}{5} &= \frac{15 \times (-4x+9)}{5} \\
 &= 3 \times (-4x+9) \\
 &= 3 \times (-4x) + 3 \times 9 \\
 &= -12x + 27
 \end{aligned}$$

3

$$\begin{aligned}
 35 \times \frac{7x-7}{5} &= \frac{35 \times (7x-7)}{5} \\
 &= 7 \times (7x-7) \\
 &= 7 \times 7x + 7 \times (-7) \\
 &= 49x - 49
 \end{aligned}$$

4

$$\begin{aligned}
 & \frac{-3x+6}{7} \times (-42) \\
 &= \frac{(-3x+6) \times (-42)}{7} \\
 &= (-3x+6) \times (-6) \\
 &= -3x \times (-6) + 6 \times (-6) \\
 &= 18x - 36
 \end{aligned}$$

5

$$\begin{aligned}
 \frac{x+6}{3} \times 12 &= \frac{(x+6) \times 12}{3} \\
 &= (x+6) \times 4 \\
 &= x \times 4 + 6 \times 4 \\
 &= 4x + 24
 \end{aligned}$$

6

$$\begin{aligned}
 & -6 \times \frac{7x-4}{2} \\
 &= \frac{-6 \times (7x-4)}{2} \\
 &= -3 \times (7x-4) \\
 &= -3 \times 7x - 3 \times (-4) \\
 &= -21x + 12
 \end{aligned}$$

①

$$\frac{2x-8}{5} \times (-20)$$

②

$$-30 \times \frac{-8x+6}{5}$$

③

$$\frac{-6x+8}{5} \times 10$$

④

$$\frac{-3x-6}{8} \times 40$$

⑤

$$\frac{9x+2}{5} \times (-40)$$

⑥

$$10 \times \frac{-7x-7}{2}$$

1

$$\begin{aligned}
 & \frac{2x-8}{5} \times (-20) \\
 = & \frac{(2x-8) \times (-20)}{5} \\
 = & (2x-8) \times (-4) \\
 = & 2x \times (-4) - 8 \times (-4) \\
 = & -8x + 32
 \end{aligned}$$

2

$$\begin{aligned}
 & -30 \times \frac{-8x+6}{5} \\
 = & \frac{-30 \times (-8x+6)}{5} \\
 = & -6 \times (-8x+6) \\
 = & -6 \times (-8x) - 6 \times 6 \\
 = & 48x - 36
 \end{aligned}$$

3

$$\begin{aligned}
 \frac{-6x+8}{5} \times 10 &= \frac{(-6x+8) \times 10}{5} \\
 &= (-6x+8) \times 2 \\
 &= -6x \times 2 + 8 \times 2 \\
 &= -12x + 16
 \end{aligned}$$

4

$$\begin{aligned}
 \frac{-3x-6}{8} \times 40 &= \frac{(-3x-6) \times 40}{8} \\
 &= (-3x-6) \times 5 \\
 &= -3x \times 5 - 6 \times 5 \\
 &= -15x - 30
 \end{aligned}$$

5

$$\begin{aligned}
 & \frac{9x+2}{5} \times (-40) \\
 = & \frac{(9x+2) \times (-40)}{5} \\
 = & (9x+2) \times (-8) \\
 = & 9x \times (-8) + 2 \times (-8) \\
 = & -72x - 16
 \end{aligned}$$

6

$$\begin{aligned}
 & 10 \times \frac{-7x-7}{2} \\
 = & \frac{10 \times (-7x-7)}{2} \\
 = & 5 \times (-7x-7) \\
 = & 5 \times (-7x) + 5 \times (-7) \\
 = & -35x - 35
 \end{aligned}$$

①

$$\frac{-8x+1}{3} \times (-18)$$

②

$$\frac{-9x+2}{2} \times 6$$

③

$$15 \times \frac{2x-3}{3}$$

④

$$\frac{7x+7}{5} \times (-40)$$

⑤

$$-8 \times \frac{-8x-3}{2}$$

⑥

$$\frac{-5x+9}{6} \times (-48)$$

1

$$\begin{aligned}
 & \frac{-8x+1}{3} \times (-18) \\
 = & \frac{(-8x+1) \times (-18)}{3} \\
 = & (-8x+1) \times (-6) \\
 = & -8x \times (-6) + 1 \times (-6) \\
 = & 48x - 6
 \end{aligned}$$

2

$$\begin{aligned}
 \frac{-9x+2}{2} \times 6 &= \frac{(-9x+2) \times 6}{2} \\
 &= (-9x+2) \times 3 \\
 &= -9x \times 3 + 2 \times 3 \\
 &= -27x + 6
 \end{aligned}$$

3

$$\begin{aligned}
 15 \times \frac{2x-3}{3} &= \frac{15 \times (2x-3)}{3} \\
 &= 5 \times (2x-3) \\
 &= 5 \times 2x + 5 \times (-3) \\
 &= 10x - 15
 \end{aligned}$$

4

$$\begin{aligned}
 \frac{7x+7}{5} \times (-40) \\
 = & \frac{(7x+7) \times (-40)}{5} \\
 = & (7x+7) \times (-8) \\
 = & 7x \times (-8) + 7 \times (-8) \\
 = & -56x - 56
 \end{aligned}$$

5

$$\begin{aligned}
 -8 \times \frac{-8x-3}{2} \\
 = & \frac{-8 \times (-8x-3)}{2} \\
 = & -4 \times (-8x-3) \\
 = & -4 \times (-8x) - 4 \times (-3) \\
 = & 32x + 12
 \end{aligned}$$

6

$$\begin{aligned}
 \frac{-5x+9}{6} \times (-48) \\
 = & \frac{(-5x+9) \times (-48)}{6} \\
 = & (-5x+9) \times (-8) \\
 = & -5x \times (-8) + 9 \times (-8) \\
 = & 40x - 72
 \end{aligned}$$

①

$$20 \times \frac{7x+7}{4}$$

②

$$\frac{-9x-8}{2} \times (-10)$$

③

$$\frac{8x-4}{3} \times (-6)$$

④

$$\frac{-x+6}{2} \times (-4)$$

⑤

$$\frac{-9x+4}{3} \times (-18)$$

⑥

$$\frac{-x+4}{7} \times (-56)$$



1

$$\begin{aligned}
 20 \times \frac{7x+7}{4} &= \frac{20 \times (7x+7)}{4} \\
 &= 5 \times (7x+7) \\
 &= 5 \times 7x + 5 \times 7 \\
 &= 35x + 35
 \end{aligned}$$

2

$$\begin{aligned}
 &\frac{-9x-8}{2} \times (-10) \\
 &= \frac{(-9x-8) \times (-10)}{2} \\
 &= (-9x-8) \times (-5) \\
 &= -9x \times (-5) - 8 \times (-5) \\
 &= 45x + 40
 \end{aligned}$$

3

$$\begin{aligned}
 &\frac{8x-4}{3} \times (-6) \\
 &= \frac{(8x-4) \times (-6)}{3} \\
 &= (8x-4) \times (-2) \\
 &= 8x \times (-2) - 4 \times (-2) \\
 &= -16x + 8
 \end{aligned}$$

4

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

5

$$\begin{aligned}
 &\frac{-9x+4}{3} \times (-18) \\
 &= \frac{(-9x+4) \times (-18)}{3} \\
 &= (-9x+4) \times (-6) \\
 &= -9x \times (-6) + 4 \times (-6) \\
 &= 54x - 24
 \end{aligned}$$

6

$$\begin{aligned}
 &\frac{-x+4}{7} \times (-56) \\
 &= \frac{(-x+4) \times (-56)}{7} \\
 &= (-x+4) \times (-8) \\
 &= -x \times (-8) + 4 \times (-8) \\
 &= 8x - 32
 \end{aligned}$$

①

$$\frac{8x-6}{5} \times 20$$

②

$$\frac{5x+8}{8} \times 40$$

③

$$-25 \times \frac{-3x-5}{5}$$

④

$$-28 \times \frac{-9x-6}{7}$$

⑤

$$-42 \times \frac{-3x-8}{6}$$

⑥

$$\frac{-2x-7}{5} \times 35$$

1

$$\begin{aligned}\frac{8x-6}{5} \times 20 &= \frac{(8x-6) \times 20}{5} \\ &= (8x-6) \times 4 \\ &= 8x \times 4 - 6 \times 4 \\ &= 32x - 24\end{aligned}$$

2

$$\begin{aligned}\frac{5x+8}{8} \times 40 &= \frac{(5x+8) \times 40}{8} \\ &= (5x+8) \times 5 \\ &= 5x \times 5 + 8 \times 5 \\ &= 25x + 40\end{aligned}$$

3

$$\begin{aligned}-25 \times \frac{-3x-5}{5} \\ &= \frac{-25 \times (-3x-5)}{5} \\ &= -5 \times (-3x-5) \\ &= -5 \times (-3x) - 5 \times (-5) \\ &= 15x + 25\end{aligned}$$

4

$$\begin{aligned}-28 \times \frac{-9x-6}{7} \\ &= \frac{-28 \times (-9x-6)}{7} \\ &= -4 \times (-9x-6) \\ &= -4 \times (-9x) - 4 \times (-6) \\ &= 36x + 24\end{aligned}$$

5

$$\begin{aligned}-42 \times \frac{-3x-8}{6} \\ &= \frac{-42 \times (-3x-8)}{6} \\ &= -7 \times (-3x-8) \\ &= -7 \times (-3x) - 7 \times (-8) \\ &= 21x + 56\end{aligned}$$

6

$$\begin{aligned}\frac{-2x-7}{5} \times 35 &= \frac{(-2x-7) \times 35}{5} \\ &= (-2x-7) \times 7 \\ &= -2x \times 7 - 7 \times 7 \\ &= -14x - 49\end{aligned}$$

①

$$-32 \times \frac{x+1}{8}$$

②

$$\frac{-9x+5}{2} \times 14$$

③

$$-42 \times \frac{-x+5}{6}$$

④

$$\frac{-x+7}{8} \times (-56)$$

⑤

$$\frac{-5x-4}{7} \times (-28)$$

⑥

$$\frac{4x-1}{6} \times 54$$

1

$$\begin{aligned}
 -32 \times \frac{x+1}{8} &= \frac{-32 \times (x+1)}{8} \\
 &= -4 \times (x+1) \\
 &= -4 \times x - 4 \times 1 \\
 &= -4x - 4
 \end{aligned}$$

2

$$\begin{aligned}
 \frac{-9x+5}{2} \times 14 &= \frac{(-9x+5) \times 14}{2} \\
 &= (-9x+5) \times 7 \\
 &= -9x \times 7 + 5 \times 7 \\
 &= -63x + 35
 \end{aligned}$$

3

$$\begin{aligned}
 -42 \times \frac{-x+5}{6} \\
 &= \frac{-42 \times (-x+5)}{6} \\
 &= -7 \times (-x+5) \\
 &= -7 \times (-x) - 7 \times 5 \\
 &= 7x - 35
 \end{aligned}$$

4

$$\begin{aligned}
 \frac{-x+7}{8} \times (-56) \\
 &= \frac{(-x+7) \times (-56)}{8} \\
 &= (-x+7) \times (-7) \\
 &= -x \times (-7) + 7 \times (-7) \\
 &= 7x - 49
 \end{aligned}$$

5

$$\begin{aligned}
 \frac{-5x-4}{7} \times (-28) \\
 &= \frac{(-5x-4) \times (-28)}{7} \\
 &= (-5x-4) \times (-4) \\
 &= -5x \times (-4) - 4 \times (-4) \\
 &= 20x + 16
 \end{aligned}$$

6

$$\begin{aligned}
 \frac{4x-1}{6} \times 54 &= \frac{(4x-1) \times 54}{6} \\
 &= (4x-1) \times 9 \\
 &= 4x \times 9 - 1 \times 9 \\
 &= 36x - 9
 \end{aligned}$$

## 問題

次の分数を約分しましょう。

①

$$\frac{-15x + 3}{12}$$

②

$$\frac{-24x - 8}{6}$$

③

$$\frac{28x + 2}{22}$$

④

$$\frac{-3x + 9}{15}$$

⑤

$$\frac{-16x + 28}{6}$$

⑥

$$\frac{30x + 18}{28}$$

1

$$\frac{-15x + 3}{12} = \frac{-5x + 1}{4}$$

別解

$$\begin{aligned}\frac{-15x + 3}{12} &= -\frac{15}{12}x + \frac{3}{12} \\ &= -\frac{5}{4}x + \frac{1}{4}\end{aligned}$$

2

$$\frac{-24x - 8}{6} = \frac{-12x - 4}{3}$$

別解

$$\begin{aligned}\frac{-24x - 8}{6} &= -\frac{24}{6}x - \frac{8}{6} \\ &= -4x - \frac{4}{3}\end{aligned}$$

3

$$\frac{28x + 2}{22} = \frac{14x + 1}{11}$$

別解

$$\begin{aligned}\frac{28x + 2}{22} &= \frac{28}{22}x + \frac{2}{22} \\ &= \frac{14}{11}x + \frac{1}{11}\end{aligned}$$

4

$$\frac{-3x + 9}{15} = \frac{-x + 3}{5}$$

別解

$$\begin{aligned}\frac{-3x + 9}{15} &= -\frac{3}{15}x + \frac{9}{15} \\ &= -\frac{1}{5}x + \frac{3}{5}\end{aligned}$$

5

$$\frac{-16x + 28}{6} = \frac{-8x + 14}{3}$$

別解

$$\begin{aligned}\frac{-16x + 28}{6} &= -\frac{16}{6}x + \frac{28}{6} \\ &= -\frac{8}{3}x + \frac{14}{3}\end{aligned}$$

6

$$\frac{30x + 18}{28} = \frac{15x + 9}{14}$$

別解

$$\begin{aligned}\frac{30x + 18}{28} &= \frac{30}{28}x + \frac{18}{28} \\ &= \frac{15}{14}x + \frac{9}{14}\end{aligned}$$



1

$$\frac{10x - 20}{22}$$

2

$$\frac{-28x + 18}{14}$$

3

$$\frac{14x + 2}{14}$$

4

$$\frac{18x - 20}{24}$$

5

$$\frac{-21x + 30}{24}$$

6

$$\frac{21x + 9}{3}$$

1

$$\frac{10x - 20}{22} = \frac{5x - 10}{11}$$

別解

$$\begin{aligned} \frac{10x - 20}{22} &= \frac{10}{22}x - \frac{20}{22} \\ &= \frac{5}{11}x - \frac{10}{11} \end{aligned}$$

2

$$\frac{-28x + 18}{14} = \frac{-14x + 9}{7}$$

別解

$$\begin{aligned} \frac{-28x + 18}{14} &= -\frac{28}{14}x + \frac{18}{14} \\ &= -2x + \frac{9}{7} \end{aligned}$$

3

$$\frac{14x + 2}{14} = \frac{7x + 1}{7}$$

別解

$$\begin{aligned} \frac{14x + 2}{14} &= \frac{14}{14}x + \frac{2}{14} \\ &= x + \frac{1}{7} \end{aligned}$$

4

$$\frac{18x - 20}{24} = \frac{9x - 10}{12}$$

別解

$$\begin{aligned} \frac{18x - 20}{24} &= \frac{18}{24}x - \frac{20}{24} \\ &= \frac{3}{4}x - \frac{5}{6} \end{aligned}$$

5

$$\frac{-21x + 30}{24} = \frac{-7x + 10}{8}$$

別解

$$\begin{aligned} \frac{-21x + 30}{24} &= -\frac{21}{24}x + \frac{30}{24} \\ &= -\frac{7}{8}x + \frac{5}{4} \end{aligned}$$

6

$$\frac{21x + 9}{3} = 7x + 3$$

別解

$$\begin{aligned} \frac{21x + 9}{3} &= \frac{21}{3}x + \frac{9}{3} \\ &= 7x + 3 \end{aligned}$$

1

$$\frac{-20x - 6}{30}$$

2

$$\frac{2x - 16}{10}$$

3

$$\frac{-27x - 18}{12}$$

4

$$\frac{-14x + 4}{18}$$

5

$$\frac{-4x - 18}{6}$$

6

$$\frac{15x - 12}{15}$$

1

$$\frac{-20x - 6}{30} = \frac{-10x - 3}{15}$$

別解

$$\begin{aligned}\frac{-20x - 6}{30} &= -\frac{20}{30}x - \frac{6}{30} \\ &= -\frac{2}{3}x - \frac{1}{5}\end{aligned}$$

2

$$\frac{2x - 16}{10} = \frac{x - 8}{5}$$

別解

$$\begin{aligned}\frac{2x - 16}{10} &= \frac{2}{10}x - \frac{16}{10} \\ &= \frac{1}{5}x - \frac{8}{5}\end{aligned}$$

3

$$\frac{-27x - 18}{12} = \frac{-9x - 6}{4}$$

別解

$$\begin{aligned}\frac{-27x - 18}{12} &= -\frac{27}{12}x - \frac{18}{12} \\ &= -\frac{9}{4}x - \frac{3}{2}\end{aligned}$$

4

$$\frac{-14x + 4}{18} = \frac{-7x + 2}{9}$$

別解

$$\begin{aligned}\frac{-14x + 4}{18} &= -\frac{14}{18}x + \frac{4}{18} \\ &= -\frac{7}{9}x + \frac{2}{9}\end{aligned}$$

5

$$\frac{-4x - 18}{6} = \frac{-2x - 9}{3}$$

別解

$$\begin{aligned}\frac{-4x - 18}{6} &= -\frac{4}{6}x - \frac{18}{6} \\ &= -\frac{2}{3}x - 3\end{aligned}$$

6

$$\frac{15x - 12}{15} = \frac{5x - 4}{5}$$

別解

$$\begin{aligned}\frac{15x - 12}{15} &= \frac{15}{15}x - \frac{12}{15} \\ &= x - \frac{4}{5}\end{aligned}$$

1

$$\frac{-14x - 20}{2}$$

2

$$\frac{-26x - 20}{2}$$

3

$$\frac{-21x + 3}{12}$$

4

$$\frac{6x - 28}{26}$$

5

$$\frac{-22x - 28}{6}$$

6

$$\frac{7x - 7}{28}$$

1

$$\frac{-14x - 20}{2} = -7x - 10$$

別解

$$\begin{aligned}\frac{-14x - 20}{2} &= -\frac{14}{2}x - \frac{20}{2} \\ &= -7x - 10\end{aligned}$$

2

$$\frac{-26x - 20}{2} = -13x - 10$$

別解

$$\begin{aligned}\frac{-26x - 20}{2} &= -\frac{26}{2}x - \frac{20}{2} \\ &= -13x - 10\end{aligned}$$

3

$$\frac{-21x + 3}{12} = \frac{-7x + 1}{4}$$

別解

$$\begin{aligned}\frac{-21x + 3}{12} &= -\frac{21}{12}x + \frac{3}{12} \\ &= -\frac{7}{4}x + \frac{1}{4}\end{aligned}$$

4

$$\frac{6x - 28}{26} = \frac{3x - 14}{13}$$

別解

$$\begin{aligned}\frac{6x - 28}{26} &= \frac{6}{26}x - \frac{28}{26} \\ &= \frac{3}{13}x - \frac{14}{13}\end{aligned}$$

5

$$\frac{-22x - 28}{6} = \frac{-11x - 14}{3}$$

別解

$$\begin{aligned}\frac{-22x - 28}{6} &= -\frac{22}{6}x - \frac{28}{6} \\ &= -\frac{11}{3}x - \frac{14}{3}\end{aligned}$$

6

$$\frac{7x - 7}{28} = \frac{x - 1}{4}$$

別解

$$\begin{aligned}\frac{7x - 7}{28} &= \frac{7}{28}x - \frac{7}{28} \\ &= \frac{1}{4}x - \frac{1}{4}\end{aligned}$$

1

$$\frac{-18x - 8}{20}$$

2

$$\frac{22x + 18}{4}$$

3

$$\frac{-2x - 18}{30}$$

4

$$\frac{-20x - 22}{18}$$

5

$$\frac{30x - 16}{4}$$

6

$$\frac{21x - 30}{3}$$

1

$$\frac{-18x - 8}{20} = \frac{-9x - 4}{10}$$

別解

$$\begin{aligned}\frac{-18x - 8}{20} &= -\frac{18}{20}x - \frac{8}{20} \\ &= -\frac{9}{10}x - \frac{2}{5}\end{aligned}$$

2

$$\frac{22x + 18}{4} = \frac{11x + 9}{2}$$

別解

$$\begin{aligned}\frac{22x + 18}{4} &= \frac{22}{4}x + \frac{18}{4} \\ &= \frac{11}{2}x + \frac{9}{2}\end{aligned}$$

3

$$\frac{-2x - 18}{30} = \frac{-x - 9}{15}$$

別解

$$\begin{aligned}\frac{-2x - 18}{30} &= -\frac{2}{30}x - \frac{18}{30} \\ &= -\frac{1}{15}x - \frac{3}{5}\end{aligned}$$

4

$$\frac{-20x - 22}{18} = \frac{-10x - 11}{9}$$

別解

$$\begin{aligned}\frac{-20x - 22}{18} &= -\frac{20}{18}x - \frac{22}{18} \\ &= -\frac{10}{9}x - \frac{11}{9}\end{aligned}$$

5

$$\frac{30x - 16}{4} = \frac{15x - 8}{2}$$

別解

$$\begin{aligned}\frac{30x - 16}{4} &= \frac{30}{4}x - \frac{16}{4} \\ &= \frac{15}{2}x - 4\end{aligned}$$

6

$$\frac{21x - 30}{3} = 7x - 10$$

別解

$$\begin{aligned}\frac{21x - 30}{3} &= \frac{21}{3}x - \frac{30}{3} \\ &= 7x - 10\end{aligned}$$



1

$$\frac{10x - 12}{16}$$

2

$$\frac{24x + 30}{16}$$

3

$$\frac{22x + 8}{30}$$

4

$$\frac{6x + 28}{6}$$

5

$$\frac{-20x + 2}{30}$$

6

$$\frac{-24x - 27}{12}$$

1

$$\frac{10x - 12}{16} = \frac{5x - 6}{8}$$

別解

$$\begin{aligned}\frac{10x - 12}{16} &= \frac{10}{16}x - \frac{12}{16} \\ &= \frac{5}{8}x - \frac{3}{4}\end{aligned}$$

2

$$\frac{24x + 30}{16} = \frac{12x + 15}{8}$$

別解

$$\begin{aligned}\frac{24x + 30}{16} &= \frac{24}{16}x + \frac{30}{16} \\ &= \frac{3}{2}x + \frac{15}{8}\end{aligned}$$

3

$$\frac{22x + 8}{30} = \frac{11x + 4}{15}$$

別解

$$\begin{aligned}\frac{22x + 8}{30} &= \frac{22}{30}x + \frac{8}{30} \\ &= \frac{11}{15}x + \frac{4}{15}\end{aligned}$$

4

$$\frac{6x + 28}{6} = \frac{3x + 14}{3}$$

別解

$$\begin{aligned}\frac{6x + 28}{6} &= \frac{6}{6}x + \frac{28}{6} \\ &= x + \frac{14}{3}\end{aligned}$$

5

$$\frac{-20x + 2}{30} = \frac{-10x + 1}{15}$$

別解

$$\begin{aligned}\frac{-20x + 2}{30} &= -\frac{20}{30}x + \frac{2}{30} \\ &= -\frac{2}{3}x + \frac{1}{15}\end{aligned}$$

6

$$\frac{-24x - 27}{12} = \frac{-8x - 9}{4}$$

別解

$$\begin{aligned}\frac{-24x - 27}{12} &= -\frac{24}{12}x - \frac{27}{12} \\ &= -2x - \frac{9}{4}\end{aligned}$$

1

$$\frac{14x + 22}{12}$$

2

$$\frac{3x - 30}{12}$$

3

$$\frac{15x + 24}{15}$$

4

$$\frac{21x + 6}{30}$$

5

$$\frac{30x + 8}{6}$$

6

$$\frac{-6x - 12}{24}$$

1

$$\frac{14x + 22}{12} = \frac{7x + 11}{6}$$

別解

$$\begin{aligned}\frac{14x + 22}{12} &= \frac{14}{12}x + \frac{22}{12} \\ &= \frac{7}{6}x + \frac{11}{6}\end{aligned}$$

2

$$\frac{3x - 30}{12} = \frac{x - 10}{4}$$

別解

$$\begin{aligned}\frac{3x - 30}{12} &= \frac{3}{12}x - \frac{30}{12} \\ &= \frac{1}{4}x - \frac{5}{2}\end{aligned}$$

3

$$\frac{15x + 24}{15} = \frac{5x + 8}{5}$$

別解

$$\begin{aligned}\frac{15x + 24}{15} &= \frac{15}{15}x + \frac{24}{15} \\ &= x + \frac{8}{5}\end{aligned}$$

4

$$\frac{21x + 6}{30} = \frac{7x + 2}{10}$$

別解

$$\begin{aligned}\frac{21x + 6}{30} &= \frac{21}{30}x + \frac{6}{30} \\ &= \frac{7}{10}x + \frac{1}{5}\end{aligned}$$

5

$$\frac{30x + 8}{6} = \frac{15x + 4}{3}$$

別解

$$\begin{aligned}\frac{30x + 8}{6} &= \frac{30}{6}x + \frac{8}{6} \\ &= 5x + \frac{4}{3}\end{aligned}$$

6

$$\frac{-6x - 12}{24} = \frac{-x - 2}{4}$$

別解

$$\begin{aligned}\frac{-6x - 12}{24} &= -\frac{6}{24}x - \frac{12}{24} \\ &= -\frac{1}{4}x - \frac{1}{2}\end{aligned}$$

1

$$\frac{-14x + 22}{18}$$

2

$$\frac{-18x - 4}{22}$$

3

$$\frac{8x + 30}{6}$$

4

$$\frac{14x + 4}{2}$$

5

$$\frac{10x - 10}{25}$$

6

$$\frac{16x - 28}{28}$$

1

$$\frac{-14x + 22}{18} = \frac{-7x + 11}{9}$$

別解

$$\begin{aligned}\frac{-14x + 22}{18} &= -\frac{14}{18}x + \frac{22}{18} \\ &= -\frac{7}{9}x + \frac{11}{9}\end{aligned}$$

2

$$\frac{-18x - 4}{22} = \frac{-9x - 2}{11}$$

別解

$$\begin{aligned}\frac{-18x - 4}{22} &= -\frac{18}{22}x - \frac{4}{22} \\ &= -\frac{9}{11}x - \frac{2}{11}\end{aligned}$$

3

$$\frac{8x + 30}{6} = \frac{4x + 15}{3}$$

別解

$$\begin{aligned}\frac{8x + 30}{6} &= \frac{8}{6}x + \frac{30}{6} \\ &= \frac{4}{3}x + 5\end{aligned}$$

4

$$\frac{14x + 4}{2} = 7x + 2$$

別解

$$\begin{aligned}\frac{14x + 4}{2} &= \frac{14}{2}x + \frac{4}{2} \\ &= 7x + 2\end{aligned}$$

5

$$\frac{10x - 10}{25} = \frac{2x - 2}{5}$$

別解

$$\begin{aligned}\frac{10x - 10}{25} &= \frac{10}{25}x - \frac{10}{25} \\ &= \frac{2}{5}x - \frac{2}{5}\end{aligned}$$

6

$$\frac{16x - 28}{28} = \frac{4x - 7}{7}$$

別解

$$\begin{aligned}\frac{16x - 28}{28} &= \frac{16}{28}x - \frac{28}{28} \\ &= \frac{4}{7}x - 1\end{aligned}$$

$$\textcircled{1}$$

$$\frac{2x + 6}{14}$$

$$\textcircled{2}$$

$$\frac{14x + 20}{22}$$

$$\textcircled{3}$$

$$\frac{20x + 30}{8}$$

$$\textcircled{4}$$

$$\frac{-3x - 3}{9}$$

$$\textcircled{5}$$

$$\frac{4x - 2}{16}$$

$$\textcircled{6}$$

$$\frac{18x - 24}{20}$$

1

$$\frac{2x+6}{14} = \frac{x+3}{7}$$

別解

$$\begin{aligned}\frac{2x+6}{14} &= \frac{2}{14}x + \frac{6}{14} \\ &= \frac{1}{7}x + \frac{3}{7}\end{aligned}$$

2

$$\frac{14x+20}{22} = \frac{7x+10}{11}$$

別解

$$\begin{aligned}\frac{14x+20}{22} &= \frac{14}{22}x + \frac{20}{22} \\ &= \frac{7}{11}x + \frac{10}{11}\end{aligned}$$

3

$$\frac{20x+30}{8} = \frac{10x+15}{4}$$

別解

$$\begin{aligned}\frac{20x+30}{8} &= \frac{20}{8}x + \frac{30}{8} \\ &= \frac{5}{2}x + \frac{15}{4}\end{aligned}$$

4

$$\frac{-3x-3}{9} = \frac{-x-1}{3}$$

別解

$$\begin{aligned}\frac{-3x-3}{9} &= -\frac{3}{9}x - \frac{3}{9} \\ &= -\frac{1}{3}x - \frac{1}{3}\end{aligned}$$

5

$$\frac{4x-2}{16} = \frac{2x-1}{8}$$

別解

$$\begin{aligned}\frac{4x-2}{16} &= \frac{4}{16}x - \frac{2}{16} \\ &= \frac{1}{4}x - \frac{1}{8}\end{aligned}$$

6

$$\frac{18x-24}{20} = \frac{9x-12}{10}$$

別解

$$\begin{aligned}\frac{18x-24}{20} &= \frac{18}{20}x - \frac{24}{20} \\ &= \frac{9}{10}x - \frac{6}{5}\end{aligned}$$



1

$$\frac{10x - 16}{14}$$

2

$$\frac{-12x + 24}{8}$$

3

$$\frac{26x + 2}{20}$$

4

$$\frac{2x - 16}{6}$$

5

$$\frac{8x + 14}{20}$$

6

$$\frac{-22x + 14}{6}$$

1

$$\frac{10x - 16}{14} = \frac{5x - 8}{7}$$

別解

$$\begin{aligned}\frac{10x - 16}{14} &= \frac{10}{14}x - \frac{16}{14} \\ &= \frac{5}{7}x - \frac{8}{7}\end{aligned}$$

2

$$\frac{-12x + 24}{8} = \frac{-3x + 6}{2}$$

別解

$$\begin{aligned}\frac{-12x + 24}{8} &= -\frac{12}{8}x + \frac{24}{8} \\ &= -\frac{3}{2}x + 3\end{aligned}$$

3

$$\frac{26x + 2}{20} = \frac{13x + 1}{10}$$

別解

$$\begin{aligned}\frac{26x + 2}{20} &= \frac{26}{20}x + \frac{2}{20} \\ &= \frac{13}{10}x + \frac{1}{10}\end{aligned}$$

4

$$\frac{2x - 16}{6} = \frac{x - 8}{3}$$

別解

$$\begin{aligned}\frac{2x - 16}{6} &= \frac{2}{6}x - \frac{16}{6} \\ &= \frac{1}{3}x - \frac{8}{3}\end{aligned}$$

5

$$\frac{8x + 14}{20} = \frac{4x + 7}{10}$$

別解

$$\begin{aligned}\frac{8x + 14}{20} &= \frac{8}{20}x + \frac{14}{20} \\ &= \frac{2}{5}x + \frac{7}{10}\end{aligned}$$

6

$$\frac{-22x + 14}{6} = \frac{-11x + 7}{3}$$

別解

$$\begin{aligned}\frac{-22x + 14}{6} &= -\frac{22}{6}x + \frac{14}{6} \\ &= -\frac{11}{3}x + \frac{7}{3}\end{aligned}$$

1

$$\frac{-24x - 8}{10}$$

2

$$\frac{6x + 8}{20}$$

3

$$\frac{28x - 4}{28}$$

4

$$\frac{2x - 2}{16}$$

5

$$\frac{-18x + 2}{6}$$

6

$$\frac{22x - 8}{20}$$

1

$$\frac{-24x - 8}{10} = \frac{-12x - 4}{5}$$

別解

$$\begin{aligned}\frac{-24x - 8}{10} &= -\frac{24}{10}x - \frac{8}{10} \\ &= -\frac{12}{5}x - \frac{4}{5}\end{aligned}$$

2

$$\frac{6x + 8}{20} = \frac{3x + 4}{10}$$

別解

$$\begin{aligned}\frac{6x + 8}{20} &= \frac{6}{20}x + \frac{8}{20} \\ &= \frac{3}{10}x + \frac{2}{5}\end{aligned}$$

3

$$\frac{28x - 4}{28} = \frac{7x - 1}{7}$$

別解

$$\begin{aligned}\frac{28x - 4}{28} &= \frac{28}{28}x - \frac{4}{28} \\ &= x - \frac{1}{7}\end{aligned}$$

4

$$\frac{2x - 2}{16} = \frac{x - 1}{8}$$

別解

$$\begin{aligned}\frac{2x - 2}{16} &= \frac{2}{16}x - \frac{2}{16} \\ &= \frac{1}{8}x - \frac{1}{8}\end{aligned}$$

5

$$\frac{-18x + 2}{6} = \frac{-9x + 1}{3}$$

別解

$$\begin{aligned}\frac{-18x + 2}{6} &= -\frac{18}{6}x + \frac{2}{6} \\ &= -3x + \frac{1}{3}\end{aligned}$$

6

$$\frac{22x - 8}{20} = \frac{11x - 4}{10}$$

別解

$$\begin{aligned}\frac{22x - 8}{20} &= \frac{22}{20}x - \frac{8}{20} \\ &= \frac{11}{10}x - \frac{2}{5}\end{aligned}$$

1

$$\frac{2x - 28}{12}$$

2

$$\frac{-12x - 24}{21}$$

3

$$\frac{-16x - 26}{20}$$

4

$$\frac{-3x + 12}{18}$$

5

$$\frac{-22x - 2}{10}$$

6

$$\frac{28x - 16}{10}$$

1

$$\frac{2x - 28}{12} = \frac{x - 14}{6}$$

別解

$$\begin{aligned}\frac{2x - 28}{12} &= \frac{2}{12}x - \frac{28}{12} \\ &= \frac{1}{6}x - \frac{7}{3}\end{aligned}$$

2

$$\frac{-12x - 24}{21} = \frac{-4x - 8}{7}$$

別解

$$\begin{aligned}\frac{-12x - 24}{21} &= -\frac{12}{21}x - \frac{24}{21} \\ &= -\frac{4}{7}x - \frac{8}{7}\end{aligned}$$

3

$$\frac{-16x - 26}{20} = \frac{-8x - 13}{10}$$

別解

$$\begin{aligned}\frac{-16x - 26}{20} &= -\frac{16}{20}x - \frac{26}{20} \\ &= -\frac{4}{5}x - \frac{13}{10}\end{aligned}$$

4

$$\frac{-3x + 12}{18} = \frac{-x + 4}{6}$$

別解

$$\begin{aligned}\frac{-3x + 12}{18} &= -\frac{3}{18}x + \frac{12}{18} \\ &= -\frac{1}{6}x + \frac{2}{3}\end{aligned}$$

5

$$\frac{-22x - 2}{10} = \frac{-11x - 1}{5}$$

別解

$$\begin{aligned}\frac{-22x - 2}{10} &= -\frac{22}{10}x - \frac{2}{10} \\ &= -\frac{11}{5}x - \frac{1}{5}\end{aligned}$$

6

$$\frac{28x - 16}{10} = \frac{14x - 8}{5}$$

別解

$$\begin{aligned}\frac{28x - 16}{10} &= \frac{28}{10}x - \frac{16}{10} \\ &= \frac{14}{5}x - \frac{8}{5}\end{aligned}$$