分数の一次式の加法・減法

次の計算をしましょう。

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

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

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

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

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

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

分数の一次式の加法・減法

次の計算をしましょう。

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

$=\frac{1}{4}x+\frac{1}{7}x+\frac{2}{7}-\frac{1}{5}$

$=\frac{7}{28}x+\frac{4}{28}x+\frac{10}{35}-\frac{7}{35}$

$=\frac{11}{28}x+\frac{3}{35}$

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

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

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

$=\frac{7}{12}x-\frac{7}{12}$

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

$=\frac{2}{3}x-\frac{1}{5}x+\frac{2}{5}-\frac{3}{7}$

$=\frac{10}{15}x-\frac{3}{15}x+\frac{14}{35}-\frac{15}{35}$

$=\frac{7}{15}x-\frac{1}{35}$

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

$=\frac{2}{3}x-\frac{3}{7}x-\frac{2}{3}-\frac{1}{4}$

$=\frac{14}{21}x-\frac{9}{21}x-\frac{8}{12}-\frac{3}{12}$

$=\frac{5}{21}x-\frac{11}{12}$

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

$=\frac{2}{5}x-\frac{4}{9}x+\frac{2}{7}+\frac{1}{4}$

$=\frac{18}{45}x-\frac{20}{45}x+\frac{8}{28}+\frac{7}{28}$

$=-\frac{2}{45}x+\frac{15}{28}$

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

$=\frac{1}{4}x+\frac{1}{3}x+\frac{1}{3}-\frac{5}{6}$

$=\frac{3}{12}x+\frac{4}{12}x+\frac{2}{6}-\frac{5}{6}$

$=\frac{7}{12}x-\frac{3}{6}$

$=\frac{7}{12}x-\frac{1}{2}$