## Corrigé de l'exercice 1

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{\frac{2}{5}+6}{\frac{-7}{9}-7}$$
$$A = \frac{\frac{2}{5}+\frac{6_{\times 5}}{1_{\times 5}}}{\frac{-7}{9}-\frac{7_{\times 9}}{1_{\times 9}}}$$
$$A = \frac{\frac{2}{5}+\frac{30}{5}}{\frac{-7}{9}-\frac{63}{9}}$$
$$A = \frac{32}{5} \div \frac{-70}{9}$$
$$A = \frac{32}{5} \times \frac{-9}{70}$$
$$A = \frac{16 \times \cancel{2}}{-5 \times \cancel{-1}} \times \frac{9 \times \cancel{-1}}{35 \times \cancel{2}}$$
$$\boxed{A = \frac{-144}{175}}$$

$$B = \frac{9}{2} \div \left(\frac{1}{11}+\frac{-1}{13}\right)$$
$$B = \frac{9}{2} \div \left(\frac{1_{\times 13}}{11_{\times 13}}+\frac{-1_{\times 11}}{13_{\times 11}}\right)$$
$$B = \frac{9}{2} \div \left(\frac{13}{143}+\frac{-11}{143}\right)$$
$$B = \frac{9}{2} \div \frac{2}{143}$$
$$B = \frac{9}{2} \times \frac{143}{2}$$
$$B =$$
$$\boxed{B = \frac{1\ 287}{4}}$$

$$C = \frac{-15}{13} - \frac{15}{104} \times \frac{-13}{9}$$
$$C = \frac{-15}{13} - \frac{5 \times \cancel{3}}{-8 \times \cancel{-13}} \times \frac{1 \times \cancel{-13}}{3 \times \cancel{3}}$$
$$C = \frac{-15}{13} - \frac{-5}{24}$$
$$C = \frac{-15_{\times 24}}{13_{\times 24}} - \frac{-5_{\times 13}}{24_{\times 13}}$$
$$C = \frac{-360}{312} - \frac{-65}{312}$$
$$\boxed{C = \frac{-295}{312}}$$

## Corrigé de l'exercice 2

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{\frac{8}{5}-1}{\frac{3}{2}-9}$$
$$A = \frac{\frac{8}{5}-\frac{1_{\times 5}}{1_{\times 5}}}{\frac{3}{2}-\frac{9_{\times 2}}{1_{\times 2}}}$$
$$A = \frac{\frac{8}{5}-\frac{5}{5}}{\frac{3}{2}-\frac{18}{2}}$$
$$A = \frac{3}{5} \div \frac{-15}{2}$$
$$A = \frac{3}{5} \times \frac{-2}{15}$$
$$A = \frac{1 \times \cancel{3}}{-5 \times \cancel{-1}} \times \frac{2 \times \cancel{-1}}{5 \times \cancel{3}}$$
$$\boxed{A = \frac{-2}{25}}$$

$$B = \frac{-1}{2} \div \left(\frac{3}{11}-\frac{-9}{4}\right)$$
$$B = \frac{-1}{2} \div \left(\frac{3_{\times 4}}{11_{\times 4}}-\frac{-9_{\times 11}}{4_{\times 11}}\right)$$
$$B = \frac{-1}{2} \div \left(\frac{12}{44}-\frac{-99}{44}\right)$$
$$B = \frac{-1}{2} \div \frac{111}{44}$$
$$B = \frac{-1}{2} \times \frac{44}{111}$$
$$B = \frac{-1}{1 \times \cancel{2}} \times \frac{22 \times \cancel{2}}{111}$$
$$\boxed{B = \frac{-22}{111}}$$

$$C = 2 + \frac{10}{9} \div \frac{16}{9}$$
$$C = 2 + \frac{10}{9} \times \frac{9}{16}$$
$$C = 2 + \frac{5 \times \cancel{2}}{1 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{8 \times \cancel{2}}$$
$$C = 2 + \frac{5}{8}$$
$$C = \frac{2_{\times 8}}{1_{\times 8}} + \frac{5}{8}$$
$$C = \frac{16}{8} + \frac{5}{8}$$
$$\boxed{C = \frac{21}{8}}$$

## Corrigé de l'exercice 3

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-7}{6} \times \left( \frac{-1}{2} - \frac{-13}{3} \right)$$
$$A = \frac{-7}{6} \times \left( \frac{-1_{\times 3}}{2_{\times 3}} - \frac{-13_{\times 2}}{3_{\times 2}} \right)$$
$$A = \frac{-7}{6} \times \left( \frac{-3}{6} - \frac{-26}{6} \right)$$
$$A = \frac{-7}{6} \times \frac{23}{6}$$
$$A =$$
$$\boxed{A = \frac{-161}{36}}$$

$$B = \frac{\frac{-7}{4} - 8}{\frac{-1}{2} + 2}$$
$$B = \frac{\frac{-7}{4} - \frac{8_{\times 4}}{1_{\times 4}}}{\frac{-1}{2} + \frac{2_{\times 2}}{1_{\times 2}}}$$
$$B = \frac{\frac{-7}{4} - \frac{32}{4}}{\frac{-1}{2} + \frac{4}{2}}$$
$$B = \frac{-39}{4} \div \frac{3}{2}$$
$$B = \frac{-39}{4} \times \frac{2}{3}$$
$$B = \frac{-13 \times \cancel{3}}{2 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{1 \times \cancel{3}}$$
$$\boxed{B = \frac{-13}{2}}$$

$$C = \frac{-20}{7} - \frac{16}{49} \times \frac{-21}{4}$$
$$C = \frac{-20}{7} - \frac{4 \times \cancel{4}}{-7 \times \cancel{-7}} \times \frac{3 \times \cancel{-7}}{1 \times \cancel{4}}$$
$$C = \frac{-20}{7} - \frac{-12}{7}$$
$$C =$$
$$C = \frac{-20}{7} - \frac{-12}{7}$$
$$\boxed{C = \frac{-8}{7}}$$

## Corrigé de l'exercice 4

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-26}{5} - \frac{26}{5} \div \frac{52}{25}$$
$$A = \frac{-26}{5} - \frac{26}{5} \times \frac{25}{52}$$
$$A = \frac{-26}{5} - \frac{1 \times \cancel{26}}{1 \times \cancel{5}} \times \frac{5 \times \cancel{5}}{2 \times \cancel{26}}$$
$$A = \frac{-26}{5} - \frac{5}{2}$$
$$A = \frac{-26_{\times 2}}{5_{\times 2}} - \frac{5_{\times 5}}{2_{\times 5}}$$
$$A = \frac{-52}{10} - \frac{25}{10}$$
$$\boxed{A = \frac{-77}{10}}$$

$$B = \frac{-10}{3} \div \left( \frac{-13}{10} + \frac{10}{13} \right)$$
$$B = \frac{-10}{3} \div \left( \frac{-13_{\times 13}}{10_{\times 13}} + \frac{10_{\times 10}}{13_{\times 10}} \right)$$
$$B = \frac{-10}{3} \div \left( \frac{-169}{130} + \frac{100}{130} \right)$$
$$B = \frac{-10}{3} \div \frac{-69}{130}$$
$$B = \frac{-10}{3} \times \frac{-130}{69}$$
$$B = \frac{-10}{-3 \times \cancel{-1}} \times \frac{130 \times \cancel{-1}}{69}$$
$$\boxed{B = \frac{1\,300}{207}}$$

$$C = \frac{\frac{-6}{5} + 6}{\frac{-7}{8} - 2}$$
$$C = \frac{\frac{-6}{5} + \frac{6_{\times 5}}{1_{\times 5}}}{\frac{-7}{8} - \frac{2_{\times 8}}{1_{\times 8}}}$$
$$C = \frac{\frac{-6}{5} + \frac{30}{5}}{\frac{-7}{8} - \frac{16}{8}}$$
$$C = \frac{24}{5} \div \frac{-23}{8}$$
$$C = \frac{24}{5} \times \frac{-8}{23}$$
$$C = \frac{24}{-5 \times \cancel{-1}} \times \frac{8 \times \cancel{-1}}{23}$$
$$\boxed{C = \frac{-192}{115}}$$

## Corrigé de l'exercice 5

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-1}{8} \div \left(\frac{-10}{9} + \frac{7}{8}\right)$$
$$A = \frac{-1}{8} \div \left(\frac{-10_{\times 8}}{9_{\times 8}} + \frac{7_{\times 9}}{8_{\times 9}}\right)$$
$$A = \frac{-1}{8} \div \left(\frac{-80}{72} + \frac{63}{72}\right)$$
$$A = \frac{-1}{8} \div \frac{-17}{72}$$
$$A = \frac{-1}{8} \times \frac{-72}{17}$$
$$A = \frac{-1}{-1 \times \cancel{-8}} \times \frac{9 \times \cancel{-8}}{17}$$
$$\boxed{A = \frac{9}{17}}$$

$$B = \frac{-3}{8} - \frac{-3}{64} \times \frac{4}{3}$$
$$B = \frac{-3}{8} - \frac{-1 \times \cancel{3}}{16 \times \cancel{4}} \times \frac{1 \times \cancel{4}}{1 \times \cancel{3}}$$
$$B = \frac{-3}{8} - \frac{-1}{16}$$
$$B = \frac{-3_{\times 2}}{8_{\times 2}} - \frac{-1}{16}$$
$$B = \frac{-6}{16} - \frac{-1}{16}$$
$$\boxed{B = \frac{-5}{16}}$$

$$C = \frac{\frac{3}{2} + 1}{\frac{-2}{3} - 7}$$
$$C = \frac{\frac{3}{2} + \frac{1_{\times 2}}{1_{\times 2}}}{\frac{-2}{3} - \frac{7_{\times 3}}{1_{\times 3}}}$$
$$C = \frac{\frac{3}{2} + \frac{2}{2}}{\frac{-2}{3} - \frac{21}{3}}$$
$$C = \frac{5}{2} \div \frac{-23}{3}$$
$$C = \frac{5}{2} \times \frac{-3}{23}$$
$$C = \frac{5}{-2 \times \cancel{-1}} \times \frac{3 \times \cancel{-1}}{23}$$
$$\boxed{C = \frac{-15}{46}}$$

## Corrigé de l'exercice 6

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-1}{4} \div \left(\frac{-8}{13} + \frac{-13}{5}\right)$$
$$A = \frac{-1}{4} \div \left(\frac{-8_{\times 5}}{13_{\times 5}} + \frac{-13_{\times 13}}{5_{\times 13}}\right)$$
$$A = \frac{-1}{4} \div \left(\frac{-40}{65} + \frac{-169}{65}\right)$$
$$A = \frac{-1}{4} \div \frac{-209}{65}$$
$$A = \frac{-1}{4} \times \frac{-65}{209}$$
$$A = \frac{-1}{-4 \times \cancel{-1}} \times \frac{65 \times \cancel{-1}}{209}$$
$$\boxed{A = \frac{65}{836}}$$

$$B = \frac{\frac{7}{4} - 8}{\frac{7}{6} - 10}$$
$$B = \frac{\frac{7}{4} - \frac{8_{\times 4}}{1_{\times 4}}}{\frac{7}{6} - \frac{10_{\times 6}}{1_{\times 6}}}$$
$$B = \frac{\frac{7}{4} - \frac{32}{4}}{\frac{7}{6} - \frac{60}{6}}$$
$$B = \frac{-25}{4} \div \frac{-53}{6}$$
$$B = \frac{-25}{4} \times \frac{-6}{53}$$
$$B = \frac{-25}{-2 \times \cancel{-2}} \times \frac{3 \times \cancel{-2}}{53}$$
$$\boxed{B = \frac{75}{106}}$$

$$C = \frac{90}{13} + \frac{3}{13} \times \frac{39}{50}$$
$$C = \frac{90}{13} + \frac{3}{1 \times \cancel{13}} \times \frac{3 \times \cancel{13}}{50}$$
$$C = \frac{90}{13} + \frac{9}{50}$$
$$C = \frac{90_{\times 50}}{13_{\times 50}} + \frac{9_{\times 13}}{50_{\times 13}}$$
$$C = \frac{4500}{650} + \frac{117}{650}$$
$$\boxed{C = \frac{4\ 617}{650}}$$

## Corrigé de l'exercice 7

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-10}{7} \times \left( \frac{-6}{11} - \frac{8}{7} \right)$$
$$A = \frac{-10}{7} \times \left( \frac{-6_{\times 7}}{11_{\times 7}} - \frac{8_{\times 11}}{7_{\times 11}} \right)$$
$$A = \frac{-10}{7} \times \left( \frac{-42}{77} - \frac{88}{77} \right)$$
$$A = \frac{-10}{7} \times \frac{-130}{77}$$
$$A = \frac{-10}{-7 \times \cancel{-1}} \times \frac{130 \times \cancel{-1}}{77}$$
$$\boxed{A = \frac{1\ 300}{539}}$$

$$B = \frac{\frac{-10}{9} + 8}{\frac{2}{3} - 4}$$
$$B = \frac{\frac{-10}{9} + \frac{8_{\times 9}}{1_{\times 9}}}{\frac{2}{3} - \frac{4_{\times 3}}{1_{\times 3}}}$$
$$B = \frac{\frac{-10}{9} + \frac{72}{9}}{\frac{2}{3} - \frac{12}{3}}$$
$$B = \frac{62}{9} \div \frac{-10}{3}$$
$$B = \frac{62}{9} \times \frac{-3}{10}$$
$$B = \frac{31 \times \cancel{2}}{-3 \times \cancel{-3}} \times \frac{1 \times \cancel{-3}}{5 \times \cancel{2}}$$
$$\boxed{B = \frac{-31}{15}}$$

$$C = \frac{-16}{7} + \frac{-9}{28} \div \frac{-10}{21}$$
$$C = \frac{-16}{7} + \frac{-9}{28} \times \frac{-21}{10}$$
$$C = \frac{-16}{7} + \frac{-9}{-4 \times \cancel{-7}} \times \frac{3 \times \cancel{-7}}{10}$$
$$C = \frac{-16}{7} + \frac{27}{40}$$
$$C = \frac{-16_{\times 40}}{7_{\times 40}} + \frac{27_{\times 7}}{40_{\times 7}}$$
$$C = \frac{-640}{280} + \frac{189}{280}$$
$$\boxed{C = \frac{-451}{280}}$$

## Corrigé de l'exercice 8

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{8}{3} + \frac{2}{3} \times \frac{3}{4}$$
$$A = \frac{8}{3} + \frac{1 \times \cancel{2}}{1 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{2 \times \cancel{2}}$$
$$A = \frac{8}{3} + \frac{1}{2}$$
$$A = \frac{8_{\times 2}}{3_{\times 2}} + \frac{1_{\times 3}}{2_{\times 3}}$$
$$A = \frac{16}{6} + \frac{3}{6}$$
$$\boxed{A = \frac{19}{6}}$$

$$B = \frac{\frac{-2}{5} - 10}{\frac{-7}{9} + 5}$$
$$B = \frac{\frac{-2}{5} - \frac{10_{\times 5}}{1_{\times 5}}}{\frac{-7}{9} + \frac{5_{\times 9}}{1_{\times 9}}}$$
$$B = \frac{\frac{-2}{5} - \frac{50}{5}}{\frac{-7}{9} + \frac{45}{9}}$$
$$B = \frac{-52}{5} \div \frac{38}{9}$$
$$B = \frac{-52}{5} \times \frac{9}{38}$$
$$B = \frac{-26 \times \cancel{2}}{5} \times \frac{9}{19 \times \cancel{2}}$$
$$\boxed{B = \frac{-234}{95}}$$

$$C = \frac{-7}{6} \div \left( \frac{5}{13} + \frac{13}{4} \right)$$
$$C = \frac{-7}{6} \div \left( \frac{5_{\times 4}}{13_{\times 4}} + \frac{13_{\times 13}}{4_{\times 13}} \right)$$
$$C = \frac{-7}{6} \div \left( \frac{20}{52} + \frac{169}{52} \right)$$
$$C = \frac{-7}{6} \div \frac{189}{52}$$
$$C = \frac{-7}{6} \times \frac{52}{189}$$
$$C = \frac{-1 \times \cancel{7}}{3 \times \cancel{2}} \times \frac{26 \times \cancel{2}}{27 \times \cancel{7}}$$
$$\boxed{C = \frac{-26}{81}}$$

## Corrigé de l'exercice 9

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{25}{3} + \frac{20}{9} \div \frac{-5}{6}$$
$$A = \frac{25}{3} + \frac{20}{9} \times \frac{-6}{5}$$
$$A = \frac{25}{3} + \frac{4 \times \cancel{5}}{-3 \times \cancel{-3}} \times \frac{2 \times \cancel{-3}}{1 \times \cancel{5}}$$
$$A = \frac{25}{3} + \frac{-8}{3}$$
$$A =$$
$$A = \frac{25}{3} + \frac{-8}{3}$$
$$\boxed{A = \frac{17}{3}}$$

$$B = \frac{-1}{2} \times \left(\frac{1}{9} + \frac{-1}{11}\right)$$
$$B = \frac{-1}{2} \times \left(\frac{1_{\times 11}}{9_{\times 11}} + \frac{-1_{\times 9}}{11_{\times 9}}\right)$$
$$B = \frac{-1}{2} \times \left(\frac{11}{99} + \frac{-9}{99}\right)$$
$$B = \frac{-1}{2} \times \frac{2}{99}$$
$$B = \frac{-1}{1 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{99}$$
$$\boxed{B = \frac{-1}{99}}$$

$$C = \frac{\frac{5}{2} - 9}{\frac{-7}{3} + 5}$$
$$C = \frac{\frac{5}{2} - \frac{9_{\times 2}}{1_{\times 2}}}{\frac{-7}{3} + \frac{5_{\times 3}}{1_{\times 3}}}$$
$$C = \frac{\frac{5}{2} - \frac{18}{2}}{\frac{-7}{3} + \frac{15}{3}}$$
$$C = \frac{-13}{2} \div \frac{8}{3}$$
$$C = \frac{-13}{2} \times \frac{3}{8}$$
$$C =$$
$$\boxed{C = \frac{-39}{16}}$$

## Corrigé de l'exercice 10

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{5}{2} + \frac{-25}{8} \times \frac{24}{5}$$
$$A = \frac{5}{2} + \frac{-5 \times \cancel{5}}{1 \times \cancel{8}} \times \frac{3 \times \cancel{8}}{1 \times \cancel{5}}$$
$$A = \frac{5}{2} + -15$$
$$A = \frac{5}{2} + \frac{-15_{\times 2}}{1_{\times 2}}$$
$$A = \frac{5}{2} + \frac{-30}{2}$$
$$\boxed{A = \frac{-25}{2}}$$

$$B = \frac{\frac{5}{7} - 1}{\frac{3}{4} - 9}$$
$$B = \frac{\frac{5}{7} - \frac{1_{\times 7}}{1_{\times 7}}}{\frac{3}{4} - \frac{9_{\times 4}}{1_{\times 4}}}$$
$$B = \frac{\frac{5}{7} - \frac{7}{7}}{\frac{3}{4} - \frac{36}{4}}$$
$$B = \frac{-2}{7} \div \frac{-33}{4}$$
$$B = \frac{-2}{7} \times \frac{-4}{33}$$
$$B = \frac{-2}{-7 \times \cancel{-1}} \times \frac{4 \times \cancel{-1}}{33}$$
$$\boxed{B = \frac{8}{231}}$$

$$C = \frac{-1}{5} \div \left(\frac{-7}{12} + \frac{9}{5}\right)$$
$$C = \frac{-1}{5} \div \left(\frac{-7_{\times 5}}{12_{\times 5}} + \frac{9_{\times 12}}{5_{\times 12}}\right)$$
$$C = \frac{-1}{5} \div \left(\frac{-35}{60} + \frac{108}{60}\right)$$
$$C = \frac{-1}{5} \div \frac{73}{60}$$
$$C = \frac{-1}{5} \times \frac{60}{73}$$
$$C = \frac{-1}{1 \times \cancel{5}} \times \frac{12 \times \cancel{5}}{73}$$
$$\boxed{C = \frac{-12}{73}}$$

## Corrigé de l'exercice 11

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{3}{10} \times \left( \frac{-11}{6} + \frac{-4}{5} \right)$$
$$A = \frac{3}{10} \times \left( \frac{-11_{\times 5}}{6_{\times 5}} + \frac{-4_{\times 6}}{5_{\times 6}} \right)$$
$$A = \frac{3}{10} \times \left( \frac{-55}{30} + \frac{-24}{30} \right)$$
$$A = \frac{3}{10} \times \frac{-79}{30}$$
$$A = \frac{1 \times \cancel{3}}{-10 \times \cancel{-1}} \times \frac{79 \times \cancel{-1}}{10 \times \cancel{3}}$$
$$\boxed{A = \frac{-79}{100}}$$

$$B = \frac{\frac{9}{2} + 1}{\frac{-9}{4} + 7}$$
$$B = \frac{\frac{9}{2} + \frac{1_{\times 2}}{1_{\times 2}}}{\frac{-9}{4} + \frac{7_{\times 4}}{1_{\times 4}}}$$
$$B = \frac{\frac{9}{2} + \frac{2}{2}}{\frac{-9}{4} + \frac{28}{4}}$$
$$B = \frac{11}{2} \div \frac{19}{4}$$
$$B = \frac{11}{2} \times \frac{4}{19}$$
$$B = \frac{11}{1 \times \cancel{2}} \times \frac{2 \times \cancel{2}}{19}$$
$$\boxed{B = \frac{22}{19}}$$

$$C = \frac{12}{7} - \frac{-5}{7} \times \frac{7}{2}$$
$$C = \frac{12}{7} - \frac{-5}{1 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{2}$$
$$C = \frac{12}{7} - \frac{-5}{2}$$
$$C = \frac{12_{\times 2}}{7_{\times 2}} - \frac{-5_{\times 7}}{2_{\times 7}}$$
$$C = \frac{24}{14} - \frac{-35}{14}$$
$$\boxed{C = \frac{59}{14}}$$

## Corrigé de l'exercice 12

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{\frac{-1}{8} - 9}{\frac{4}{5} + 2}$$
$$A = \frac{\frac{-1}{8} - \frac{9_{\times 8}}{1_{\times 8}}}{\frac{4}{5} + \frac{2_{\times 5}}{1_{\times 5}}}$$
$$A = \frac{\frac{-1}{8} - \frac{72}{8}}{\frac{4}{5} + \frac{10}{5}}$$
$$A = \frac{-73}{8} \div \frac{14}{5}$$
$$A = \frac{-73}{8} \times \frac{5}{14}$$
$$A =$$
$$\boxed{A = \frac{-365}{112}}$$

$$B = \frac{3}{4} \times \left( \frac{7}{11} + \frac{-9}{8} \right)$$
$$B = \frac{3}{4} \times \left( \frac{7_{\times 8}}{11_{\times 8}} + \frac{-9_{\times 11}}{8_{\times 11}} \right)$$
$$B = \frac{3}{4} \times \left( \frac{56}{88} + \frac{-99}{88} \right)$$
$$B = \frac{3}{4} \times \frac{-43}{88}$$
$$B = \frac{3}{-4 \times \cancel{-1}} \times \frac{43 \times \cancel{-1}}{88}$$
$$\boxed{B = \frac{-129}{352}}$$

$$C = \frac{48}{7} + \frac{-24}{7} \div \frac{-72}{7}$$
$$C = \frac{48}{7} + \frac{-24}{7} \times \frac{-7}{72}$$
$$C = \frac{48}{7} + \frac{-1 \times \cancel{24}}{-1 \times \cancel{-7}} \times \frac{1 \times \cancel{-7}}{3 \times \cancel{24}}$$
$$C = \frac{48}{7} + \frac{1}{3}$$
$$C = \frac{48_{\times 3}}{7_{\times 3}} + \frac{1_{\times 7}}{3_{\times 7}}$$
$$C = \frac{144}{21} + \frac{7}{21}$$
$$\boxed{C = \frac{151}{21}}$$