

**Corrigé de l'exercice 1**

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

$$A = \frac{14}{9} - \frac{28}{81} \div \frac{-7}{5}$$

$$A = \frac{14}{9} - \frac{28}{81} \times \frac{-5}{7}$$

$$A = \frac{14}{9} - \frac{4 \times 7}{-81 \times \cancel{1}} \times \frac{5 \times \cancel{1}}{1 \times 7}$$

$$A = \frac{14}{9} - \frac{-20}{81}$$

$$A = \frac{14 \times 9}{9 \times 9} - \frac{-20}{81}$$

$$A = \frac{126}{81} - \frac{-20}{81}$$

$$A = \frac{146}{81}$$

$$B = \frac{\frac{5}{2} - 3}{-8} - 6$$

$$B = \frac{\frac{5}{2} - \frac{3 \times 2}{1 \times 2}}{-8} - \frac{6 \times 5}{1 \times 5}$$

$$B = \frac{\frac{5}{2} - \frac{6}{2}}{-8} - \frac{30}{5}$$

$$B = \frac{-1}{2} \div \frac{-38}{5}$$

$$B = \frac{-1}{2} \times \frac{-5}{38}$$

$$B = \frac{-1}{-2 \times \cancel{1}} \times \frac{5 \times \cancel{1}}{38}$$

$$B = \frac{5}{76}$$

$$C = \frac{-7}{9} \div \left( \frac{7}{8} - \frac{-8}{11} \right)$$

$$C = \frac{-7}{9} \div \left( \frac{7 \times 11}{8 \times 11} - \frac{-8 \times 8}{11 \times 8} \right)$$

$$C = \frac{-7}{9} \div \left( \frac{77}{88} - \frac{-64}{88} \right)$$

$$C = \frac{-7}{9} \div \frac{141}{88}$$

$$C = \frac{-7}{9} \times \frac{88}{141}$$

$$C =$$

$$C = \frac{-616}{1\ 269}$$

**Corrigé de l'exercice 2**

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

$$A = \frac{-10}{3} \times \left( \frac{-11}{12} - \frac{-1}{13} \right)$$

$$A = \frac{-10}{3} \times \left( \frac{-11 \times 13}{12 \times 13} - \frac{-1 \times 12}{13 \times 12} \right)$$

$$A = \frac{-10}{3} \times \left( \frac{-143}{156} - \frac{-12}{156} \right)$$

$$A = \frac{-10}{3} \times \frac{-131}{156}$$

$$A = \frac{-5 \times \cancel{2}}{-3 \times \cancel{1}} \times \frac{131 \times \cancel{1}}{78 \times \cancel{2}}$$

$$A = \frac{655}{234}$$

$$B = \frac{\frac{-1}{2} + 6}{-1} - 8$$

$$B = \frac{\frac{-1}{2} + \frac{6 \times 2}{1 \times 2}}{-1} - \frac{8 \times 4}{1 \times 4}$$

$$B = \frac{\frac{-1}{2} + \frac{12}{2}}{-1} - \frac{32}{4}$$

$$B = \frac{11}{2} \div \frac{-33}{4}$$

$$B = \frac{11}{2} \times \frac{-4}{33}$$

$$B = \frac{1 \times \cancel{11}}{-1 \times \cancel{2}} \times \frac{2 \times \cancel{2}}{3 \times \cancel{11}}$$

$$B = \frac{-2}{3}$$

$$C = \frac{5}{3} - \frac{5}{6} \div \frac{1}{2}$$

$$C = \frac{5}{3} - \frac{5}{6} \times 2$$

$$C = \frac{5}{3} - \frac{5}{3 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{1}$$

$$C = \frac{5}{3} - \frac{5}{3}$$

$$C =$$

$$C = \frac{5}{3} - \frac{5}{3}$$

$$C = \frac{0}{3}$$

$$C = 0$$

**Corrigé de l'exercice 3**

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

$$A = \frac{9}{13} - \frac{-12}{65} \div \frac{-18}{91}$$

$$A = \frac{9}{13} - \frac{-12}{65} \times \frac{-91}{18}$$

$$A = \frac{9}{13} - \frac{-2 \times \cancel{6}}{-5 \times \cancel{13}} \times \frac{7 \times \cancel{13}}{3 \times \cancel{6}}$$

$$A = \frac{9}{13} - \frac{14}{15}$$

$$A = \frac{9 \times 15}{13 \times 15} - \frac{14 \times 13}{15 \times 13}$$

$$A = \frac{135}{195} - \frac{182}{195}$$

$$A = \frac{-47}{195}$$

$$B = \frac{9}{2} \times \left( \frac{7}{12} - \frac{2}{11} \right)$$

$$B = \frac{9}{2} \times \left( \frac{7 \times 11}{12 \times 11} - \frac{2 \times 12}{11 \times 12} \right)$$

$$B = \frac{9}{2} \times \left( \frac{77}{132} - \frac{24}{132} \right)$$

$$B = \frac{9}{2} \times \frac{53}{132}$$

$$B = \frac{3 \times \cancel{3}}{2} \times \frac{53}{44 \times \cancel{3}}$$

$$B = \frac{159}{88}$$

$$C = \frac{-6}{7} - 10$$

$$\frac{-6}{7} - 10$$

$$C = \frac{-6}{7} - \frac{10 \times 7}{1 \times 7}$$

$$C = \frac{-6}{7} - \frac{70}{7}$$

$$C = \frac{-6}{7} - \frac{70}{7}$$

$$C = \frac{-6}{7} - \frac{70}{7}$$

$$C = \frac{-76}{7} \div \frac{-37}{3}$$

$$C = \frac{-76}{7} \times \frac{-3}{37}$$

$$C = \frac{-76}{-7 \times \cancel{1}} \times \frac{3 \times \cancel{1}}{37}$$

$$C = \frac{228}{259}$$

### Corrigé de l'exercice 4

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

$$A = \frac{5}{7} \times \left( \frac{-3}{5} - \frac{-1}{12} \right)$$

$$A = \frac{5}{7} \times \left( \frac{-3 \times 12}{5 \times 12} - \frac{-1 \times 5}{12 \times 5} \right)$$

$$A = \frac{5}{7} \times \left( \frac{-36}{60} - \frac{-5}{60} \right)$$

$$A = \frac{5}{7} \times \frac{-31}{60}$$

$$A = \frac{1 \times \cancel{5}}{-7 \times \cancel{1}} \times \frac{31 \times \cancel{1}}{12 \times \cancel{5}}$$

$$A = \frac{-31}{84}$$

$$B = \frac{-9}{2} + \frac{7}{18} \times -4$$

$$B = \frac{-9}{2} + \frac{7}{-9 \times \cancel{2}} \times \frac{2 \times \cancel{2}}{1}$$

$$B = \frac{-9}{2} + \frac{-14}{9}$$

$$B = \frac{-9 \times 9}{2 \times 9} + \frac{-14 \times 2}{9 \times 2}$$

$$B = \frac{-81}{18} + \frac{-28}{18}$$

$$B = \frac{-109}{18}$$

$$C = \frac{7}{5} + 8$$

$$\frac{7}{5} + 8$$

$$C = \frac{7}{5} + \frac{8 \times 5}{1 \times 5}$$

$$C = \frac{7}{5} + \frac{40}{5}$$

$$C = \frac{7}{5} + \frac{40}{5}$$

$$C = \frac{47}{5} \div \frac{-16}{3}$$

$$C = \frac{47}{5} \times \frac{-3}{16}$$

$$C = \frac{47}{5} \times \frac{-3}{16}$$

$$C = \frac{47}{-5 \times \cancel{1}} \times \frac{3 \times \cancel{1}}{16}$$

$$C = \frac{-141}{80}$$

### Corrigé de l'exercice 5

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

$$A = \frac{\frac{-2}{5} + 8}{\frac{-7}{2} - 5}$$

$$A = \frac{\frac{-2}{5} + \frac{8 \times 5}{1 \times 5}}{\frac{-7}{2} - \frac{5 \times 2}{1 \times 2}}$$

$$A = \frac{\frac{-2}{5} + \frac{40}{5}}{\frac{-7}{2} - \frac{10}{2}}$$

$$A = \frac{38}{5} \div \frac{-17}{2}$$

$$A = \frac{38}{5} \times \frac{-2}{17}$$

$$A = \frac{38}{-5 \times \cancel{1}} \times \frac{2 \times \cancel{1}}{17}$$

$$A = \frac{-76}{85}$$

$$B = \frac{-104}{15} - \frac{-26}{15} \times \frac{9}{65}$$

$$B = \frac{-104}{15} - \frac{-2 \times \cancel{13}}{5 \times \cancel{3}} \times \frac{3 \times \cancel{3}}{5 \times \cancel{13}}$$

$$B = \frac{-104}{15} - \frac{-6}{25}$$

$$B = \frac{-104 \times 5}{15 \times 5} - \frac{-6 \times 3}{25 \times 3}$$

$$B = \frac{-520}{75} - \frac{-18}{75}$$

$$B = \frac{-502}{75}$$

$$C = \frac{-3}{2} \times \left( \frac{-3}{5} - \frac{-1}{6} \right)$$

$$C = \frac{-3}{2} \times \left( \frac{-3 \times 6}{5 \times 6} - \frac{-1 \times 5}{6 \times 5} \right)$$

$$C = \frac{-3}{2} \times \left( \frac{-18}{30} - \frac{-5}{30} \right)$$

$$C = \frac{-3}{2} \times \frac{-13}{30}$$

$$C = \frac{-1 \times \cancel{3}}{-2 \times \cancel{1}} \times \frac{13 \times \cancel{1}}{10 \times \cancel{3}}$$

$$C = \frac{13}{20}$$

### Corrigé de l'exercice 6

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

$$A = \frac{-2}{9} \times \left( \frac{9}{4} - \frac{-5}{3} \right)$$

$$A = \frac{-2}{9} \times \left( \frac{9 \times 3}{4 \times 3} - \frac{-5 \times 4}{3 \times 4} \right)$$

$$A = \frac{-2}{9} \times \left( \frac{27}{12} - \frac{-20}{12} \right)$$

$$A = \frac{-2}{9} \times \frac{47}{12}$$

$$A = \frac{-1 \times \cancel{2}}{9} \times \frac{47}{6 \times \cancel{2}}$$

$$A = \frac{-47}{54}$$

$$B = \frac{-8}{7} + 1$$

$$\frac{-7}{6} + 2$$

$$B = \frac{\frac{-8}{7} + \frac{1 \times 7}{1 \times 7}}{\frac{-7}{6} + \frac{2 \times 6}{1 \times 6}}$$

$$B = \frac{\frac{-8}{7} + \frac{7}{7}}{\frac{-7}{6} + \frac{12}{6}}$$

$$B = \frac{-1}{7} \div \frac{5}{6}$$

$$B = \frac{-1}{7} \times \frac{6}{5}$$

$$B =$$

$$B = \frac{-6}{35}$$

$$C = 5 + \frac{1}{5} \times \frac{40}{3}$$

$$C = 5 + \frac{1}{1 \times \cancel{5}} \times \frac{8 \times \cancel{5}}{3}$$

$$C = 5 + \frac{8}{3}$$

$$C = \frac{5 \times 3}{1 \times 3} + \frac{8}{3}$$

$$C = \frac{15}{3} + \frac{8}{3}$$

$$C = \frac{23}{3}$$