

**Corrigé de l'exercice 1**

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

$$A = \frac{-91}{3} + \frac{13}{21} \div \frac{-13}{3}$$

$$A = \frac{-91}{3} + \frac{13}{21} \times \frac{-3}{13}$$

$$A = \frac{-91}{3} + \frac{1 \times \cancel{13}}{-7 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{1 \times \cancel{13}}$$

$$A = \frac{-91}{3} + \frac{-1}{7}$$

$$A = \frac{-91 \times 7}{3 \times 7} + \frac{-1 \times 3}{7 \times 3}$$

$$A = \frac{-637}{21} + \frac{-3}{21}$$

$$A = \frac{-640}{21}$$

$$B = \frac{-4}{7} + 6$$

$$B = \frac{5}{8} + 4$$

$$B = \frac{-4}{7} + \frac{6 \times 7}{1 \times 7}$$

$$B = \frac{5}{8} + \frac{4 \times 8}{1 \times 8}$$

$$B = \frac{-4}{7} + \frac{42}{7}$$

$$B = \frac{5}{8} + \frac{32}{8}$$

$$B = \frac{38}{7} \div \frac{37}{8}$$

$$B = \frac{38}{7} \times \frac{8}{37}$$

$$B =$$

$$B = \frac{304}{259}$$

$$C = \frac{10}{3} \div \left( \frac{-2}{11} + \frac{11}{6} \right)$$

$$C = \frac{10}{3} \div \left( \frac{-2 \times 6}{11 \times 6} + \frac{11 \times 11}{6 \times 11} \right)$$

$$C = \frac{10}{3} \div \left( \frac{-12}{66} + \frac{121}{66} \right)$$

$$C = \frac{10}{3} \div \frac{109}{66}$$

$$C = \frac{10}{3} \times \frac{66}{109}$$

$$C = \frac{10}{1 \times \cancel{3}} \times \frac{22 \times \cancel{3}}{109}$$

$$C = \frac{220}{109}$$

**Corrigé de l'exercice 2**

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

$$A = \frac{-36}{5} - \frac{36}{25} \div \frac{-6}{5}$$

$$A = \frac{-36}{5} - \frac{36}{25} \times \frac{-5}{6}$$

$$A = \frac{-36}{5} - \frac{6 \times \cancel{6}}{-5 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{1 \times \cancel{6}}$$

$$A = \frac{-36}{5} - \frac{-6}{5}$$

$$A =$$

$$A = \frac{-36}{5} - \frac{-6}{5}$$

$$A = \frac{-30}{5}$$

$$A = -6$$

$$B = \frac{3}{2} \times \left( \frac{3}{4} - \frac{-12}{5} \right)$$

$$B = \frac{3}{2} \times \left( \frac{3 \times 5}{4 \times 5} - \frac{-12 \times 4}{5 \times 4} \right)$$

$$B = \frac{3}{2} \times \left( \frac{15}{20} - \frac{-48}{20} \right)$$

$$B = \frac{3}{2} \times \frac{63}{20}$$

$$B =$$

$$B = \frac{189}{40}$$

$$C = \frac{-1}{3} - 5$$

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

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

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

$$C = \frac{-1}{2} - \frac{15}{2}$$

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

$$C = \frac{-16}{3} \div \frac{-9}{2}$$

$$C = \frac{-16}{3} \times \frac{-2}{9}$$

$$C = \frac{-16}{-3 \times \cancel{1}} \times \frac{2 \times \cancel{1}}{9}$$

$$C = \frac{32}{27}$$

**Corrigé de l'exercice 3**

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

$$A = \frac{10}{3} - \frac{5}{12} \times \frac{24}{35}$$

$$A = \frac{10}{3} - \frac{1 \times \cancel{5}}{1 \times \cancel{12}} \times \frac{2 \times \cancel{12}}{7 \times \cancel{5}}$$

$$A = \frac{10}{3} - \frac{2}{7}$$

$$A = \frac{10 \times 7}{3 \times 7} - \frac{2 \times 3}{7 \times 3}$$

$$A = \frac{70}{21} - \frac{6}{21}$$

$$A = \frac{64}{21}$$

$$B = \frac{-7}{10} \div \left( \frac{8}{9} + \frac{9}{13} \right)$$

$$B = \frac{-7}{10} \div \left( \frac{8 \times 13}{9 \times 13} + \frac{9 \times 9}{13 \times 9} \right)$$

$$B = \frac{-7}{10} \div \left( \frac{104}{117} + \frac{81}{117} \right)$$

$$B = \frac{-7}{10} \div \frac{185}{117}$$

$$B = \frac{-7}{10} \times \frac{117}{185}$$

$$B =$$

$$B = \frac{-819}{1850}$$

$$C = \frac{\frac{-5}{3} + 1}{\frac{-6}{7} - 9}$$

$$C = \frac{\frac{-5}{3} + \frac{1 \times 3}{1 \times 3}}{\frac{-6}{7} - \frac{9 \times 7}{1 \times 7}}$$

$$C = \frac{\frac{-5}{3} + \frac{3}{3}}{\frac{-6}{7} - \frac{63}{7}}$$

$$C = \frac{-2}{3} \div \frac{-69}{7}$$

$$C = \frac{-2}{3} \times \frac{-7}{69}$$

$$C = \frac{-2}{-3 \times \cancel{1}} \times \frac{7 \times \cancel{1}}{69}$$

$$C = \frac{14}{207}$$

### Corrigé de l'exercice 4

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

$$A = \frac{\frac{-6}{7} - 5}{\frac{-2}{5} - 10}$$

$$A = \frac{\frac{-6}{7} - \frac{5 \times 7}{1 \times 7}}{\frac{-2}{5} - \frac{10 \times 5}{1 \times 5}}$$

$$A = \frac{\frac{-6}{7} - \frac{35}{7}}{\frac{-2}{5} - \frac{50}{5}}$$

$$A = \frac{-41}{7} \div \frac{-52}{5}$$

$$A = \frac{-41}{7} \times \frac{-5}{52}$$

$$A = \frac{-41}{-7 \times \cancel{1}} \times \frac{5 \times \cancel{1}}{52}$$

$$A = \frac{205}{364}$$

$$B = \frac{52}{7} - \frac{-13}{7} \div \frac{130}{49}$$

$$B = \frac{52}{7} - \frac{-13}{7} \times \frac{49}{130}$$

$$B = \frac{52}{7} - \frac{-1 \times \cancel{13}}{1 \times \cancel{7}} \times \frac{7 \times \cancel{7}}{10 \times \cancel{13}}$$

$$B = \frac{52}{7} - \frac{-7}{10}$$

$$B = \frac{52 \times 10}{7 \times 10} - \frac{-7 \times 7}{10 \times 7}$$

$$B = \frac{520}{70} - \frac{-49}{70}$$

$$B = \frac{569}{70}$$

$$C = \frac{-7}{6} \times \left( \frac{-1}{6} + \frac{11}{7} \right)$$

$$C = \frac{-7}{6} \times \left( \frac{-1 \times 7}{6 \times 7} + \frac{11 \times 6}{7 \times 6} \right)$$

$$C = \frac{-7}{6} \times \left( \frac{-7}{42} + \frac{66}{42} \right)$$

$$C = \frac{-7}{6} \times \frac{59}{42}$$

$$C = \frac{-1 \times \cancel{7}}{6} \times \frac{59}{6 \times \cancel{7}}$$

$$C = \frac{-59}{36}$$

### Corrigé de l'exercice 5

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

$$A = \frac{6}{7} \times \left( \frac{1}{11} + \frac{11}{6} \right)$$

$$A = \frac{6}{7} \times \left( \frac{1 \times 6}{11 \times 6} + \frac{11 \times 11}{6 \times 11} \right)$$

$$A = \frac{6}{7} \times \left( \frac{6}{66} + \frac{121}{66} \right)$$

$$A = \frac{6}{7} \times \frac{127}{66}$$

$$A = \frac{1 \times \cancel{6}}{7} \times \frac{127}{11 \times \cancel{6}}$$

$$A = \frac{127}{77}$$

$$B = \frac{-10}{9} + 3$$

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

$$B = \frac{-10}{9} + \frac{3 \times 9}{1 \times 9}$$

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

$$B = \frac{-10}{9} + \frac{27}{9}$$

$$= \frac{-1}{2} + \frac{10}{2}$$

$$B = \frac{17}{9} \div \frac{9}{2}$$

$$B = \frac{17}{9} \times \frac{2}{9}$$

$$B =$$

$$B = \frac{34}{81}$$

$$C = -8 + \frac{-2}{5} \times \frac{-3}{2}$$

$$C = -8 + \frac{-1 \times \cancel{2}}{-5 \times \cancel{1}} \times \frac{3 \times \cancel{1}}{1 \times \cancel{2}}$$

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

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

$$C = \frac{-40}{5} + \frac{3}{5}$$

$$C = \frac{-37}{5}$$

### Corrigé de l'exercice 6

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

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

$$= \frac{-1}{2} - 5$$

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

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

$$A = \frac{-1}{5} + \frac{35}{5}$$

$$= \frac{-1}{2} - \frac{10}{2}$$

$$A = \frac{34}{5} \div \frac{-11}{2}$$

$$A = \frac{34}{5} \times \frac{-2}{11}$$

$$A = \frac{34}{-5 \times \cancel{1}} \times \frac{2 \times \cancel{1}}{11}$$

$$A = \frac{-68}{55}$$

$$B = \frac{-26}{3} - \frac{65}{18} \div \frac{-26}{63}$$

$$B = \frac{-26}{3} - \frac{65}{18} \times \frac{-63}{26}$$

$$B = \frac{-26}{3} - \frac{5 \times \cancel{13}}{-2 \times \cancel{9}} \times \frac{7 \times \cancel{9}}{2 \times \cancel{13}}$$

$$B = \frac{-26}{3} - \frac{-35}{4}$$

$$B = \frac{-26 \times 4}{3 \times 4} - \frac{-35 \times 3}{4 \times 3}$$

$$B = \frac{-104}{12} - \frac{-105}{12}$$

$$B = \frac{1}{12}$$

$$C = \frac{7}{3} \times \left( \frac{-1}{2} - \frac{-1}{3} \right)$$

$$C = \frac{7}{3} \times \left( \frac{-1 \times 3}{2 \times 3} - \frac{-1 \times 2}{3 \times 2} \right)$$

$$C = \frac{7}{3} \times \left( \frac{-3}{6} - \frac{-2}{6} \right)$$

$$C = \frac{7}{3} \times \frac{-1}{6}$$

$$C = \frac{7}{-3 \times \cancel{1}} \times \frac{1 \times \cancel{1}}{6}$$

$$C = \frac{-7}{18}$$