

Corrigé de l'exercice 1

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

$$A = \frac{5}{4} \times \left(\frac{7}{13} + \frac{-11}{6} \right)$$

$$A = \frac{5}{4} \times \left(\frac{7 \times 6}{13 \times 6} + \frac{-11 \times 13}{6 \times 13} \right)$$

$$A = \frac{5}{4} \times \left(\frac{42}{78} + \frac{-143}{78} \right)$$

$$A = \frac{5}{4} \times \frac{-101}{78}$$

$$A = \frac{5}{-4 \times \cancel{1}} \times \frac{101 \times \cancel{1}}{78}$$

$$A = \frac{-505}{312}$$

$$B = \frac{-7}{5} - 2$$

$$\frac{-8}{3} + 1$$

$$B = \frac{-7}{5} - \frac{2 \times 5}{1 \times 5}$$

$$\frac{-8}{3} + \frac{1 \times 3}{1 \times 3}$$

$$B = \frac{-7}{5} - \frac{10}{5}$$

$$\frac{-8}{3} + \frac{3}{3}$$

$$B = \frac{-17}{5} \div \frac{-5}{3}$$

$$B = \frac{-17}{5} \times \frac{-3}{5}$$

$$B = \frac{-17}{-5 \times \cancel{1}} \times \frac{3 \times \cancel{1}}{5}$$

$$B = \frac{51}{25}$$

$$C = \frac{-32}{7} - \frac{-4}{49} \times \frac{21}{8}$$

$$C = \frac{-32}{7} - \frac{-1 \times \cancel{4}}{7 \times \cancel{7}} \times \frac{3 \times \cancel{7}}{2 \times \cancel{4}}$$

$$C = \frac{-32}{7} - \frac{-3}{14}$$

$$C = \frac{-32 \times 2}{7 \times 2} - \frac{-3}{14}$$

$$C = \frac{-64}{14} - \frac{-3}{14}$$

$$C = \frac{-61}{14}$$

Corrigé de l'exercice 2

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

$$A = \frac{3}{8} \div \left(\frac{1}{13} + \frac{3}{10} \right)$$

$$A = \frac{3}{8} \div \left(\frac{1 \times 10}{13 \times 10} + \frac{3 \times 13}{10 \times 13} \right)$$

$$A = \frac{3}{8} \div \left(\frac{10}{130} + \frac{39}{130} \right)$$

$$A = \frac{3}{8} \div \frac{49}{130}$$

$$A = \frac{3}{8} \times \frac{130}{49}$$

$$A = \frac{3}{4 \times \cancel{2}} \times \frac{65 \times \cancel{2}}{49}$$

$$A = \frac{195}{196}$$

$$B = \frac{5}{6} + 10$$

$$\frac{-10}{7} + 4$$

$$B = \frac{5}{6} + \frac{10 \times 6}{1 \times 6}$$

$$\frac{-10}{7} + \frac{4 \times 7}{1 \times 7}$$

$$B = \frac{5}{6} + \frac{60}{6}$$

$$\frac{-10}{7} + \frac{28}{7}$$

$$B = \frac{65}{6} \div \frac{18}{7}$$

$$B = \frac{65}{6} \times \frac{7}{18}$$

$$B =$$

$$B = \frac{455}{108}$$

$$C = \frac{-39}{4} + \frac{-39}{64} \div \frac{65}{48}$$

$$C = \frac{-39}{4} + \frac{-39}{64} \times \frac{48}{65}$$

$$C = \frac{-39}{4} + \frac{-3 \times \cancel{16}}{4 \times \cancel{16}} \times \frac{3 \times \cancel{16}}{5 \times \cancel{16}}$$

$$C = \frac{-39}{4} + \frac{-9}{20}$$

$$C = \frac{-39 \times 5}{4 \times 5} + \frac{-9}{20}$$

$$C = \frac{-195}{20} + \frac{-9}{20}$$

$$C = \frac{-204}{20}$$

$$C = \frac{-51}{5}$$

Corrigé de l'exercice 3

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

$$A = \frac{54}{7} - \frac{-9}{7} \times \frac{49}{81}$$

$$A = \frac{54}{7} - \frac{-1 \times 9}{1 \times 7} \times \frac{7 \times 7}{9 \times 9}$$

$$A = \frac{54}{7} - \frac{-7}{9}$$

$$A = \frac{54 \times 9}{7 \times 9} - \frac{-7 \times 7}{9 \times 7}$$

$$A = \frac{486}{63} - \frac{-49}{63}$$

$$A = \frac{535}{63}$$

$$B = \frac{3}{2} \div \left(\frac{-11}{3} - \frac{1}{4} \right)$$

$$B = \frac{3}{2} \div \left(\frac{-11 \times 4}{3 \times 4} - \frac{1 \times 3}{4 \times 3} \right)$$

$$B = \frac{3}{2} \div \left(\frac{-44}{12} - \frac{3}{12} \right)$$

$$B = \frac{3}{2} \div \frac{-47}{12}$$

$$B = \frac{3}{2} \times \frac{-12}{47}$$

$$B = \frac{3}{-1 \times 2} \times \frac{6 \times -2}{47}$$

$$B = \frac{-18}{47}$$

$$C = \frac{-4}{5} + 7$$

$$C = \frac{-4}{8} + 7$$

$$C = \frac{-4}{5} + \frac{7 \times 5}{1 \times 5}$$

$$C = \frac{-4}{8} + \frac{7 \times 8}{1 \times 8}$$

$$C = \frac{-4}{5} + \frac{35}{5}$$

$$C = \frac{31}{5} + \frac{56}{5}$$

$$C = \frac{31}{5} \div \frac{59}{8}$$

$$C = \frac{31}{5} \times \frac{8}{59}$$

$$C =$$

$$C = \frac{248}{295}$$

Corrigé de l'exercice 4

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

$$A = \frac{-5}{6} \div \left(\frac{-10}{9} + \frac{-3}{2} \right)$$

$$A = \frac{-5}{6} \div \left(\frac{-10 \times 2}{9 \times 2} + \frac{-3 \times 9}{2 \times 9} \right)$$

$$A = \frac{-5}{6} \div \left(\frac{-20}{18} + \frac{-27}{18} \right)$$

$$A = \frac{-5}{6} \div \frac{-47}{18}$$

$$A = \frac{-5}{6} \times \frac{-18}{47}$$

$$A = \frac{-5}{-1 \times 6} \times \frac{3 \times -6}{47}$$

$$A = \frac{15}{47}$$

$$B = \frac{-8}{9} - 6$$

$$B = \frac{-1}{3} + 7$$

$$B = \frac{-8}{9} - \frac{6 \times 9}{1 \times 9}$$

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

$$B = \frac{-8}{9} - \frac{54}{9}$$

$$B = \frac{-1}{3} + \frac{21}{3}$$

$$B = \frac{-62}{9} \div \frac{20}{3}$$

$$B = \frac{-62}{9} \times \frac{3}{20}$$

$$B = \frac{-31 \times 2}{3 \times 3} \times \frac{1 \times 3}{10 \times 2}$$

$$B = \frac{-31}{30}$$

$$C = \frac{7}{5} - \frac{14}{15} \times \frac{50}{21}$$

$$C = \frac{7}{5} - \frac{2 \times 7}{3 \times 3} \times \frac{10 \times 5}{3 \times 7}$$

$$C = \frac{7}{5} - \frac{20}{9}$$

$$C = \frac{7 \times 9}{5 \times 9} - \frac{20 \times 5}{9 \times 5}$$

$$C = \frac{63}{45} - \frac{100}{45}$$

$$C = \frac{-37}{45}$$

Corrigé de l'exercice 5

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

$$A = \frac{-3}{4} \times \left(\frac{12}{13} - \frac{2}{11} \right)$$

$$A = \frac{-3}{4} \times \left(\frac{12 \times 11}{13 \times 11} - \frac{2 \times 13}{11 \times 13} \right)$$

$$A = \frac{-3}{4} \times \left(\frac{132}{143} - \frac{26}{143} \right)$$

$$A = \frac{-3}{4} \times \frac{106}{143}$$

$$A = \frac{-3}{2 \times 2} \times \frac{53 \times 2}{143}$$

$$A = \frac{-159}{286}$$

$$B = -15 + \frac{-1}{2} \div -2$$

$$B = -15 + \frac{-1}{2} \times \frac{-1}{2}$$

$$B = -15 + \frac{-1}{-2 \times \cancel{1}} \times \frac{1 \times \cancel{1}}{2}$$

$$B = -15 + \frac{1}{4}$$

$$B = \frac{-15 \times 4}{1 \times 4} + \frac{1}{4}$$

$$B = \frac{-60}{4} + \frac{1}{4}$$

$$B = \frac{-59}{4}$$

$$C = \frac{-5}{4} - 1$$

$$\frac{-5}{6} + 9$$

$$C = \frac{\frac{-5}{4} - \frac{1 \times 4}{1 \times 4}}{\frac{-5}{6} + \frac{9 \times 6}{1 \times 6}}$$

$$C = \frac{\frac{-5}{4} - \frac{4}{4}}{\frac{-5}{6} + \frac{54}{6}}$$

$$C = \frac{-9}{4} \div \frac{49}{6}$$

$$C = \frac{-9}{4} \times \frac{6}{49}$$

$$C = \frac{-9}{2 \times 2} \times \frac{3 \times 2}{49}$$

$$C = \frac{-27}{98}$$