

Corrigé de l'exercice 1

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

$$A = \frac{5}{36} + \frac{-5}{36} \times \frac{9}{5}$$

$$A = \frac{5}{36} + \frac{-1 \times \cancel{5}}{4 \times \cancel{9}} \times \frac{1 \times \cancel{9}}{1 \times \cancel{5}}$$

$$A = \frac{5}{36} + \frac{-1}{4}$$

$$A = \frac{5}{36} + \frac{-1 \times 9}{4 \times 9}$$

$$A = \frac{5}{36} + \frac{-9}{36}$$

$$A = \frac{-4}{36}$$

$$A = \frac{-1}{9}$$

$$B = \frac{\frac{-1}{9} - 9}{\frac{-3}{4} - 1}$$

$$B = \frac{\frac{-1}{9} - \frac{9 \times 9}{1 \times 9}}{\frac{-3}{4} - \frac{1 \times 4}{1 \times 4}}$$

$$B = \frac{\frac{-1}{9} - \frac{81}{9}}{\frac{-3}{4} - \frac{4}{4}}$$

$$B = \frac{-82}{9} \div \frac{-7}{4}$$

$$B = \frac{-82}{9} \times \frac{-4}{7}$$

$$B = \frac{-82}{-9 \times \cancel{1}} \times \frac{4 \times \cancel{1}}{7}$$

$$B = \frac{328}{63}$$

$$C = \frac{7}{10} \times \left(\frac{11}{6} - \frac{1}{5} \right)$$

$$C = \frac{7}{10} \times \left(\frac{11 \times 5}{6 \times 5} - \frac{1 \times 6}{5 \times 6} \right)$$

$$C = \frac{7}{10} \times \left(\frac{55}{30} - \frac{6}{30} \right)$$

$$C = \frac{7}{10} \times \frac{49}{30}$$

$$C =$$

$$C = \frac{343}{300}$$

Corrigé de l'exercice 2

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

$$A = \frac{7}{8} \times \left(\frac{3}{4} + \frac{13}{3} \right)$$

$$A = \frac{7}{8} \times \left(\frac{3 \times 3}{4 \times 3} + \frac{13 \times 4}{3 \times 4} \right)$$

$$A = \frac{7}{8} \times \left(\frac{9}{12} + \frac{52}{12} \right)$$

$$A = \frac{7}{8} \times \frac{61}{12}$$

$$A =$$

$$A = \frac{427}{96}$$

$$B = \frac{\frac{7}{5} - 8}{\frac{3}{4} - 5}$$

$$B = \frac{\frac{7}{5} - \frac{8 \times 5}{1 \times 5}}{\frac{3}{4} - \frac{5 \times 4}{1 \times 4}}$$

$$B = \frac{\frac{7}{5} - \frac{40}{5}}{\frac{3}{4} - \frac{20}{4}}$$

$$B = \frac{-33}{5} \div \frac{-17}{4}$$

$$B = \frac{-33}{5} \times \frac{-4}{17}$$

$$B = \frac{-33}{-5 \times \cancel{1}} \times \frac{4 \times \cancel{1}}{17}$$

$$B = \frac{132}{85}$$

$$C = \frac{35}{4} - \frac{-7}{36} \times \frac{-4}{5}$$

$$C = \frac{35}{4} - \frac{-7}{-9 \times \cancel{4}} \times \frac{1 \times \cancel{4}}{5}$$

$$C = \frac{35}{4} - \frac{7}{45}$$

$$C = \frac{35 \times 45}{4 \times 45} - \frac{7 \times 4}{45 \times 4}$$

$$C = \frac{1575}{180} - \frac{28}{180}$$

$$C = \frac{1547}{180}$$

Corrigé de l'exercice 3

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

$$A = \frac{-15}{14} - \frac{25}{28} \div \frac{-5}{7}$$

$$A = \frac{-15}{14} - \frac{25}{28} \times \frac{-7}{5}$$

$$A = \frac{-15}{14} - \frac{5 \times \cancel{5}}{-4 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{1 \times \cancel{5}}$$

$$A = \frac{-15}{14} - \frac{-5}{4}$$

$$A = \frac{-15 \times 2}{14 \times 2} - \frac{-5 \times 7}{4 \times 7}$$

$$A = \frac{-30}{28} - \frac{-35}{28}$$

$$A = \frac{5}{28}$$

$$B = \frac{-6}{5} \div \left(\frac{1}{11} - \frac{4}{13} \right)$$

$$B = \frac{-6}{5} \div \left(\frac{1 \times 13}{11 \times 13} - \frac{4 \times 11}{13 \times 11} \right)$$

$$B = \frac{-6}{5} \div \left(\frac{13}{143} - \frac{44}{143} \right)$$

$$B = \frac{-6}{5} \div \frac{-31}{143}$$

$$B = \frac{-6}{5} \times \frac{-143}{31}$$

$$B = \frac{-6}{-5 \times \cancel{1}} \times \frac{143 \times \cancel{1}}{31}$$

$$B = \frac{858}{155}$$

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

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

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

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

$$C = \frac{5}{3} - \frac{18}{3}$$

$$C = \frac{3}{2} - \frac{3}{18}$$

$$C = \frac{-13}{3} \div \frac{-16}{3}$$

$$C = \frac{-13}{3} \times \frac{-3}{16}$$

$$C = \frac{-13}{-1 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{16}$$

$$C = \frac{13}{16}$$

Corrigé de l'exercice 4

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

$$A = \frac{8}{3} \times \left(\frac{9}{4} + \frac{6}{11} \right)$$

$$A = \frac{8}{3} \times \left(\frac{9 \times 11}{4 \times 11} + \frac{6 \times 4}{11 \times 4} \right)$$

$$A = \frac{8}{3} \times \left(\frac{99}{44} + \frac{24}{44} \right)$$

$$A = \frac{8}{3} \times \frac{123}{44}$$

$$A = \frac{2 \times \cancel{4}}{1 \times \cancel{3}} \times \frac{41 \times \cancel{3}}{11 \times \cancel{4}}$$

$$A = \frac{82}{11}$$

$$B = \frac{81}{10} - \frac{-27}{20} \times \frac{5}{72}$$

$$B = \frac{81}{10} - \frac{-3 \times \cancel{9}}{4 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{8 \times \cancel{9}}$$

$$B = \frac{81}{10} - \frac{-3}{32}$$

$$B = \frac{81 \times 16}{10 \times 16} - \frac{-3 \times 5}{32 \times 5}$$

$$B = \frac{1296}{160} - \frac{-15}{160}$$

$$B = \frac{1311}{160}$$

$$C = \frac{-5}{2} + 6$$

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

$$C = \frac{-5}{2} + \frac{6 \times 2}{1 \times 2}$$

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

$$C = \frac{-5}{2} + \frac{12}{2}$$

$$C = \frac{2}{3} + \frac{2}{25}$$

$$C = \frac{7}{2} \div \frac{28}{5}$$

$$C = \frac{7}{2} \times \frac{5}{28}$$

$$C = \frac{1 \times \cancel{7}}{2} \times \frac{5}{4 \times \cancel{7}}$$

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

Corrigé de l'exercice 5

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

$$A = -7 - \frac{5}{2} \div -7$$

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

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

$$A = -7 - \frac{-5}{14}$$

$$A = \frac{-7 \times 14}{1 \times 14} - \frac{-5}{14}$$

$$A = \frac{-98}{14} - \frac{-5}{14}$$

$$A = \frac{-93}{14}$$

$$B = \frac{-10}{9} \times \left(\frac{2}{11} - \frac{-7}{9} \right)$$

$$B = \frac{-10}{9} \times \left(\frac{2 \times 9}{11 \times 9} - \frac{-7 \times 11}{9 \times 11} \right)$$

$$B = \frac{-10}{9} \times \left(\frac{18}{99} - \frac{-77}{99} \right)$$

$$B = \frac{-10}{9} \times \frac{95}{99}$$

$$B =$$

$$B = \frac{-950}{891}$$

$$C = \frac{\frac{2}{7} + 4}{\frac{-3}{4} - 2}$$

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

$$C = \frac{\frac{2}{7} + \frac{28}{7}}{\frac{-3}{4} - \frac{8}{4}}$$

$$C = \frac{30}{7} \div \frac{-11}{4}$$

$$C = \frac{30}{7} \times \frac{-4}{11}$$

$$C = \frac{30}{-7 \times \cancel{1}} \times \frac{4 \times \cancel{1}}{11}$$

$$C = \frac{-120}{77}$$

Corrigé de l'exercice 6

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

$$A = \frac{\frac{5}{2} + 6}{\frac{-1}{6} - 6}$$

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

$$A = \frac{\frac{5}{2} + \frac{12}{2}}{\frac{-1}{6} - \frac{36}{6}}$$

$$A = \frac{17}{2} \div \frac{-37}{6}$$

$$A = \frac{17}{2} \times \frac{-6}{37}$$

$$A = \frac{17}{-1 \times \cancel{2}} \times \frac{3 \times \cancel{2}}{37}$$

$$A = \frac{-51}{37}$$

$$B = \frac{-8}{5} \times \left(\frac{-9}{8} + \frac{4}{11} \right)$$

$$B = \frac{-8}{5} \times \left(\frac{-9 \times 11}{8 \times 11} + \frac{4 \times 8}{11 \times 8} \right)$$

$$B = \frac{-8}{5} \times \left(\frac{-99}{88} + \frac{32}{88} \right)$$

$$B = \frac{-8}{5} \times \frac{-67}{88}$$

$$B = \frac{-1 \times \cancel{8}}{-5 \times \cancel{1}} \times \frac{67 \times \cancel{1}}{11 \times \cancel{8}}$$

$$B = \frac{67}{55}$$

$$C = \frac{-30}{7} + \frac{10}{7} \times \frac{-21}{10}$$

$$C = \frac{-30}{7} + \frac{1 \times \cancel{10}}{-1 \times \cancel{7}} \times \frac{3 \times \cancel{7}}{1 \times \cancel{10}}$$

$$C = \frac{-30}{7} + -3$$

$$C = \frac{-30}{7} + \frac{-3 \times 7}{1 \times 7}$$

$$C = \frac{-30}{7} + \frac{-21}{7}$$

$$C = \frac{-51}{7}$$