

Corrigé de l'exercice 1

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

$$A = \frac{6}{7} - \frac{2}{7} \div \frac{24}{7}$$

$$A = \frac{6}{7} - \frac{2}{7} \times \frac{7}{24}$$

$$A = \frac{6}{7} - \frac{1 \times \cancel{2}}{1 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{12 \times \cancel{2}}$$

$$A = \frac{6}{7} - \frac{1}{12}$$

$$A = \frac{6 \times 12}{7 \times 12} - \frac{1 \times 7}{12 \times 7}$$

$$A = \frac{72}{84} - \frac{7}{84}$$

$$A = \frac{65}{84}$$

$$B = \frac{\frac{2}{3} + 10}{-5}$$

$$B = \frac{-5}{9} + 3$$

$$B = \frac{\frac{2}{3} + \frac{10 \times 3}{1 \times 3}}{\frac{-5}{9} + \frac{3 \times 9}{1 \times 9}}$$

$$B = \frac{\frac{2}{3} + \frac{30}{3}}{\frac{-5}{9} + \frac{27}{9}}$$

$$B = \frac{\frac{32}{3}}{\frac{-5}{9} + \frac{27}{9}}$$

$$B = \frac{32}{3} \div \frac{22}{9}$$

$$B = \frac{32}{3} \times \frac{9}{22}$$

$$B = \frac{16 \times \cancel{2}}{1 \times \cancel{3}} \times \frac{3 \times \cancel{3}}{11 \times \cancel{2}}$$

$$B = \frac{16}{11}$$

$$B = \frac{48}{11}$$

$$C = \frac{-1}{7} \div \left(\frac{4}{5} - \frac{7}{6} \right)$$

$$C = \frac{-1}{7} \div \left(\frac{4 \times 6}{5 \times 6} - \frac{7 \times 5}{6 \times 5} \right)$$

$$C = \frac{-1}{7} \div \left(\frac{24}{30} - \frac{35}{30} \right)$$

$$C = \frac{-1}{7} \div \frac{-11}{30}$$

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

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

$$C = \frac{30}{77}$$

Corrigé de l'exercice 2

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

$$A = \frac{13}{2} - \frac{-13}{10} \div \frac{26}{7}$$

$$A = \frac{13}{2} - \frac{-13}{10} \times \frac{7}{26}$$

$$A = \frac{13}{2} - \frac{-1 \times \cancel{13}}{10} \times \frac{7}{2 \times \cancel{13}}$$

$$A = \frac{13}{2} - \frac{-7}{20}$$

$$A = \frac{13 \times 10}{2 \times 10} - \frac{-7}{20}$$

$$A = \frac{130}{20} - \frac{-7}{20}$$

$$A = \frac{137}{20}$$

$$B = \frac{-1}{9} \div \left(\frac{3}{13} - \frac{13}{2} \right)$$

$$B = \frac{-1}{9} \div \left(\frac{3 \times 2}{13 \times 2} - \frac{13 \times 13}{2 \times 13} \right)$$

$$B = \frac{-1}{9} \div \left(\frac{6}{26} - \frac{169}{26} \right)$$

$$B = \frac{-1}{9} \div \frac{-163}{26}$$

$$B = \frac{-1}{9} \times \frac{-26}{163}$$

$$B = \frac{-1}{-9 \times \cancel{1}} \times \frac{26 \times \cancel{1}}{163}$$

$$B = \frac{26}{163}$$

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

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

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

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

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

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

$$C = \frac{-7}{6} \div \frac{-47}{6}$$

$$C = \frac{-7}{6} \times \frac{-6}{47}$$

$$C = \frac{-7}{-1 \times \cancel{6}} \times \frac{1 \times \cancel{6}}{47}$$

$$C = \frac{7}{47}$$

Corrigé de l'exercice 3

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

$$A = \frac{7}{6} \div \left(\frac{-7}{6} + \frac{-8}{7} \right)$$

$$A = \frac{7}{6} \div \left(\frac{-7 \times 7}{6 \times 7} + \frac{-8 \times 6}{7 \times 6} \right)$$

$$A = \frac{7}{6} \div \left(\frac{-49}{42} + \frac{-48}{42} \right)$$

$$A = \frac{7}{6} \div \frac{-97}{42}$$

$$A = \frac{7}{6} \times \frac{-42}{97}$$

$$A = \frac{7}{-1 \times \cancel{6}} \times \frac{7 \times \cancel{6}}{97}$$

$$A = \frac{-49}{97}$$

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

$$\frac{9}{10} - 6$$

$$B = \frac{-1}{9} - \frac{4 \times 5}{1 \times 5}$$

$$B = \frac{-1}{9} - \frac{20}{6 \times 10}$$

$$B = \frac{-1}{10} - \frac{20}{1 \times 10}$$

$$B = \frac{-1}{10} - \frac{20}{60}$$

$$B = \frac{-21}{5} \div \frac{-51}{10}$$

$$B = \frac{-21}{5} \times \frac{-10}{51}$$

$$B = \frac{-7 \times \cancel{3}}{-1 \times \cancel{5}} \times \frac{2 \times \cancel{5}}{17 \times \cancel{3}}$$

$$B = \frac{14}{17}$$

$$C = \frac{45}{7} - \frac{27}{28} \times \frac{-56}{81}$$

$$C = \frac{45}{7} - \frac{1 \times \cancel{27}}{-1 \times \cancel{28}} \times \frac{2 \times \cancel{28}}{3 \times \cancel{27}}$$

$$C = \frac{45}{7} - \frac{-2}{3}$$

$$C = \frac{45 \times 3}{7 \times 3} - \frac{-2 \times 7}{3 \times 7}$$

$$C = \frac{135}{21} - \frac{-14}{21}$$

$$C = \frac{149}{21}$$

Corrigé de l'exercice 4

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

$$A = \frac{-1}{7} \times \left(\frac{5}{3} + \frac{6}{13} \right)$$

$$A = \frac{-1}{7} \times \left(\frac{5 \times 13}{3 \times 13} + \frac{6 \times 3}{13 \times 3} \right)$$

$$A = \frac{-1}{7} \times \left(\frac{65}{39} + \frac{18}{39} \right)$$

$$A = \frac{-1}{7} \times \frac{83}{39}$$

$$A =$$

$$A = \frac{-83}{273}$$

$$B = 20 + \frac{-35}{4} \times \frac{2}{5}$$

$$B = 20 + \frac{-7 \times \cancel{5}}{2 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{1 \times \cancel{5}}$$

$$B = 20 + \frac{-7}{2}$$

$$B = \frac{20 \times 2}{1 \times 2} + \frac{-7}{2}$$

$$B = \frac{40}{2} + \frac{-7}{2}$$

$$B = \frac{33}{2}$$

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

$$\frac{10}{7} - 8$$

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

$$C = \frac{10}{7} - \frac{8 \times 7}{1 \times 7}$$

$$C = \frac{3}{10} - \frac{18}{56}$$

$$C = \frac{2}{10} - \frac{18}{56}$$

$$C = \frac{-15}{2} \div \frac{-46}{7}$$

$$C = \frac{-15}{2} \times \frac{-7}{46}$$

$$C = \frac{-15}{-2 \times \cancel{1}} \times \frac{7 \times \cancel{1}}{46}$$

$$C = \frac{105}{92}$$

Corrigé de l'exercice 5

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

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

$$A = \frac{\frac{5}{7} - 9}{\frac{-10}{7} + \frac{3 \times 7}{1 \times 7}}$$

$$A = \frac{\frac{-10}{7} + \frac{21}{7}}{\frac{5}{7} - \frac{63}{7}}$$

$$A = \frac{11}{7} \div \frac{-58}{7}$$

$$A = \frac{11}{7} \times \frac{-7}{58}$$

$$A = \frac{11}{-1 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{58}$$

$$A = \frac{-11}{58}$$

$$B = \frac{7}{3} + \frac{2}{9} \div \frac{-4}{5}$$

$$B = \frac{7}{3} + \frac{2}{9} \times \frac{-5}{4}$$

$$B = \frac{7}{3} + \frac{1 \times \cancel{2}}{-9 \times \cancel{4}} \times \frac{5 \times \cancel{1}}{2 \times \cancel{2}}$$

$$B = \frac{7}{3} + \frac{-5}{18}$$

$$B = \frac{7 \times 6}{3 \times 6} + \frac{-5}{18}$$

$$B = \frac{42}{18} + \frac{-5}{18}$$

$$B = \frac{37}{18}$$

$$C = \frac{-1}{2} \div \left(\frac{9}{13} + \frac{-13}{6} \right)$$

$$C = \frac{-1}{2} \div \left(\frac{9 \times 6}{13 \times 6} + \frac{-13 \times 13}{6 \times 13} \right)$$

$$C = \frac{-1}{2} \div \left(\frac{54}{78} + \frac{-169}{78} \right)$$

$$C = \frac{-1}{2} \div \frac{-115}{78}$$

$$C = \frac{-1}{2} \times \frac{-78}{115}$$

$$C = \frac{-1}{-1 \times \cancel{2}} \times \frac{39 \times \cancel{2}}{115}$$

$$C = \frac{39}{115}$$