

Corrigé de l'exercice 1

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

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

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

$$A = \frac{5}{3} \times \left(\frac{-27}{30} + \frac{-50}{30} \right)$$

$$A = \frac{5}{3} \times \frac{-77}{30}$$

$$A = \frac{1 \times \cancel{5}}{-3 \times \cancel{3}} \times \frac{77 \times \cancel{1}}{6 \times \cancel{5}}$$

$$A = \frac{-77}{18}$$

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

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

$$\frac{-7}{7} - \frac{8 \times 8}{1 \times 8}$$

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

$$\frac{-7}{7} + \frac{64}{1 \times 7}$$

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

$$B = \frac{-71}{8} \div \frac{20}{7}$$

$$B = \frac{-71}{8} \times \frac{7}{20}$$

$$B =$$

$$B = \frac{-497}{160}$$

$$C = -6 + \frac{24}{35} \times \frac{-5}{3}$$

$$C = -6 + \frac{8 \times \cancel{3}}{-7 \times \cancel{5}} \times \frac{1 \times \cancel{5}}{1 \times \cancel{3}}$$

$$C = -6 + \frac{-8}{7}$$

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

$$C = \frac{-42}{7} + \frac{-8}{7}$$

$$C = \frac{-50}{7}$$

Corrigé de l'exercice 2

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

$$A = \frac{-24}{49} - \frac{-36}{49} \times \frac{28}{15}$$

$$A = \frac{-24}{49} - \frac{-12 \times \cancel{3}}{7 \times \cancel{7}} \times \frac{4 \times \cancel{7}}{5 \times \cancel{3}}$$

$$A = \frac{-24}{49} - \frac{-48}{35}$$

$$A = \frac{-24 \times 5}{49 \times 5} - \frac{-48 \times 7}{35 \times 7}$$

$$A = \frac{-120}{245} - \frac{-336}{245}$$

$$A = \frac{216}{245}$$

$$B = \frac{7}{3} - 6$$

$$\frac{-3}{7} - 3$$

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

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

$$\frac{7}{7} - \frac{18}{1 \times 7}$$

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

$$B = \frac{-11}{3} \div \frac{-24}{7}$$

$$B = \frac{-11}{3} \times \frac{-7}{24}$$

$$B = \frac{-11}{-3 \times \cancel{1}} \times \frac{7 \times \cancel{1}}{24}$$

$$B = \frac{77}{72}$$

$$C = \frac{-4}{3} \times \left(\frac{-13}{6} - \frac{13}{5} \right)$$

$$C = \frac{-4}{3} \times \left(\frac{-13 \times 5}{6 \times 5} - \frac{13 \times 6}{5 \times 6} \right)$$

$$C = \frac{-4}{3} \times \left(\frac{-65}{30} - \frac{78}{30} \right)$$

$$C = \frac{-4}{3} \times \frac{-143}{30}$$

$$C = \frac{-2 \times \cancel{2}}{-3 \times \cancel{1}} \times \frac{143 \times \cancel{1}}{15 \times \cancel{2}}$$

$$C = \frac{286}{45}$$

Corrigé de l'exercice 3

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

$$A = \frac{16}{7} + \frac{-12}{7} \div \frac{36}{49}$$

$$A = \frac{16}{7} + \frac{-12}{7} \times \frac{49}{36}$$

$$A = \frac{16}{7} + \frac{-1 \times \cancel{12}}{1 \times \cancel{7}} \times \frac{7 \times \cancel{7}}{3 \times \cancel{12}}$$

$$A = \frac{16}{7} + \frac{-7}{3}$$

$$A = \frac{16 \times 3}{7 \times 3} + \frac{-7 \times 7}{3 \times 7}$$

$$A = \frac{48}{21} + \frac{-49}{21}$$

$$A = \frac{-1}{21}$$

$$B = \frac{-5}{4} - 6$$

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

$$B = \frac{-5}{4} - \frac{6 \times 4}{1 \times 4}$$

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

$$B = \frac{-5}{2} - \frac{24}{2}$$

$$B = \frac{-5}{2} - \frac{14}{2}$$

$$B = \frac{-29}{4} \div \frac{-11}{2}$$

$$B = \frac{-29}{4} \times \frac{-2}{11}$$

$$B = \frac{-29}{-2 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{11}$$

$$B = \frac{29}{22}$$

$$C = \frac{-7}{3} \div \left(\frac{-1}{10} + \frac{13}{7} \right)$$

$$C = \frac{-7}{3} \div \left(\frac{-1 \times 7}{10 \times 7} + \frac{13 \times 10}{7 \times 10} \right)$$

$$C = \frac{-7}{3} \div \left(\frac{-7}{70} + \frac{130}{70} \right)$$

$$C = \frac{-7}{3} \div \frac{123}{70}$$

$$C = \frac{-7}{3} \times \frac{70}{123}$$

$$C =$$

$$C = \frac{-490}{369}$$

Corrigé de l'exercice 4

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

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

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

$$A = -4 + \frac{-3}{7}$$

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

$$A = \frac{-28}{7} + \frac{-3}{7}$$

$$A = \frac{-31}{7}$$

$$B = \frac{8}{3} \div \left(\frac{11}{5} + \frac{-13}{4} \right)$$

$$B = \frac{8}{3} \div \left(\frac{11 \times 4}{5 \times 4} + \frac{-13 \times 5}{4 \times 5} \right)$$

$$B = \frac{8}{3} \div \left(\frac{44}{20} + \frac{-65}{20} \right)$$

$$B = \frac{8}{3} \div \frac{-21}{20}$$

$$B = \frac{8}{3} \times \frac{-20}{21}$$

$$B = \frac{8}{-3 \times \cancel{3}} \times \frac{20 \times \cancel{3}}{21}$$

$$B = \frac{-160}{63}$$

$$C = \frac{\frac{3}{5} + 5}{-4}$$

$$C = \frac{\frac{3}{5} + 5}{-4} + 4$$

$$C = \frac{\frac{3}{5} + \frac{5 \times 5}{1 \times 5}}{-4} + \frac{4 \times 3}{1 \times 3}$$

$$C = \frac{\frac{3}{5} + \frac{25}{5}}{-4} + \frac{12}{3}$$

$$C = \frac{\frac{3}{5} + \frac{25}{5}}{-4} + \frac{12}{3}$$

$$C = \frac{28}{5} \div \frac{8}{3}$$

$$C = \frac{28}{5} \times \frac{3}{8}$$

$$C = \frac{7 \times \cancel{4}}{5} \times \frac{3}{2 \times \cancel{4}}$$

$$C = \frac{21}{10}$$

Corrigé de l'exercice 5

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

$$A = \frac{-3}{8} \times \left(\frac{10}{7} + \frac{7}{11} \right)$$

$$A = \frac{-3}{8} \times \left(\frac{10 \times 11}{7 \times 11} + \frac{7 \times 7}{11 \times 7} \right)$$

$$A = \frac{-3}{8} \times \left(\frac{110}{77} + \frac{49}{77} \right)$$

$$A = \frac{-3}{8} \times \frac{159}{77}$$

$$A =$$

$$A = \frac{-477}{616}$$

$$B = \frac{120}{13} + \frac{-36}{91} \times \frac{-13}{36}$$

$$B = \frac{120}{13} + \frac{-1 \times \cancel{36}}{-7 \times \cancel{13}} \times \frac{1 \times \cancel{13}}{1 \times \cancel{36}}$$

$$B = \frac{120}{13} + \frac{1}{7}$$

$$B = \frac{120 \times 7}{13 \times 7} + \frac{1 \times 13}{7 \times 13}$$

$$B = \frac{840}{91} + \frac{13}{91}$$

$$B = \frac{853}{91}$$

$$C = \frac{\frac{10}{3} - 6}{-9 - 8}$$

$$C = \frac{\frac{10}{3} - \frac{6 \times 3}{1 \times 3}}{-9 - 8}$$

$$C = \frac{\frac{10}{3} - \frac{1 \times 3}{8 \times 10}}{-9 - 8}$$

$$C = \frac{\frac{10}{3} - \frac{3}{80}}{-9 - 8}$$

$$C = \frac{-8}{3} \div \frac{-89}{10}$$

$$C = \frac{-8}{3} \times \frac{-10}{89}$$

$$C = \frac{-8}{3} \times \frac{-10}{89}$$

$$C = \frac{-8}{-3 \times \cancel{1}} \times \frac{10 \times \cancel{1}}{89}$$

$$C = \frac{80}{267}$$

Corrigé de l'exercice 6

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

$$A = \frac{-9}{10} \times \left(\frac{3}{4} + \frac{-2}{13} \right)$$

$$A = \frac{-9}{10} \times \left(\frac{3 \times 13}{4 \times 13} + \frac{-2 \times 4}{13 \times 4} \right)$$

$$A = \frac{-9}{10} \times \left(\frac{39}{52} + \frac{-8}{52} \right)$$

$$A = \frac{-9}{10} \times \frac{31}{52}$$

$$A =$$

$$A = \frac{-279}{520}$$

$$B = \frac{\frac{10}{3} - 3}{-1 - 3}$$

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

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

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

$$B = \frac{1}{3} \div \frac{-16}{5}$$

$$B = \frac{1}{3} \times \frac{-5}{16}$$

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

$$B = \frac{-5}{48}$$

$$C = \frac{-7}{2} + \frac{35}{18} \div \frac{21}{4}$$

$$C = \frac{-7}{2} + \frac{35}{18} \times \frac{4}{21}$$

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

$$C = \frac{-7}{2} + \frac{10}{27}$$

$$C = \frac{-7 \times 27}{2 \times 27} + \frac{10 \times 2}{27 \times 2}$$

$$C = \frac{-189}{54} + \frac{20}{54}$$

$$C = \frac{-169}{54}$$