

Corrigé de l'exercice 1

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

$$A = \frac{-7}{10} \times \left(\frac{7}{4} + \frac{13}{9} \right)$$

$$A = \frac{-7}{10} \times \left(\frac{7 \times 9}{4 \times 9} + \frac{13 \times 4}{9 \times 4} \right)$$

$$A = \frac{-7}{10} \times \left(\frac{63}{36} + \frac{52}{36} \right)$$

$$A = \frac{-7}{10} \times \frac{115}{36}$$

$$A = \frac{-7}{2 \times 5} \times \frac{23 \times 5}{36}$$

$$A = \frac{-161}{72}$$

$$B = \frac{-27}{20} + \frac{27}{100} \times \frac{-70}{27}$$

$$B = \frac{-27}{20} + \frac{1 \times \cancel{27}}{-10 \times \cancel{10}} \times \frac{7 \times \cancel{10}}{1 \times \cancel{27}}$$

$$B = \frac{-27}{20} + \frac{-7}{10}$$

$$B = \frac{-27}{20} + \frac{-7 \times 2}{10 \times 2}$$

$$B = \frac{-27}{20} + \frac{-14}{20}$$

$$B = \frac{-41}{20}$$

$$C = \frac{-1}{5} + 10$$

$$C = \frac{-9}{4} - 3$$

$$C = \frac{-1}{5} + \frac{10 \times 5}{1 \times 5}$$

$$C = \frac{-1}{5} + \frac{50}{5}$$

$$C = \frac{49}{5} \div \frac{-21}{4}$$

$$C = \frac{49}{5} \times \frac{-4}{21}$$

$$C = \frac{7 \times 7}{-5 \times \cancel{1}} \times \frac{4 \times \cancel{1}}{3 \times 7}$$

$$C = \frac{-28}{15}$$

Corrigé de l'exercice 2

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

$$A = \frac{-3}{2} \div \left(\frac{10}{9} - \frac{5}{13} \right)$$

$$A = \frac{-3}{2} \div \left(\frac{10 \times 13}{9 \times 13} - \frac{5 \times 9}{13 \times 9} \right)$$

$$A = \frac{-3}{2} \div \left(\frac{130}{117} - \frac{45}{117} \right)$$

$$A = \frac{-3}{2} \div \frac{85}{117}$$

$$A = \frac{-3}{2} \times \frac{117}{85}$$

$$A =$$

$$A = \frac{-351}{170}$$

$$B = \frac{-77}{9} + \frac{-11}{9} \times \frac{-45}{22}$$

$$B = \frac{-77}{9} + \frac{-1 \times \cancel{11}}{-1 \times \cancel{9}} \times \frac{5 \times \cancel{9}}{2 \times \cancel{11}}$$

$$B = \frac{-77}{9} + \frac{5}{2}$$

$$B = \frac{-77 \times 2}{9 \times 2} + \frac{5 \times 9}{2 \times 9}$$

$$B = \frac{-154}{18} + \frac{45}{18}$$

$$B = \frac{-109}{18}$$

$$C = \frac{-1}{2} - 7$$

$$C = \frac{3}{2} - 10$$

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

$$C = \frac{-1}{2} - \frac{14}{2}$$

$$C = \frac{-15}{2} \div \frac{-17}{2}$$

$$C = \frac{-15}{2} \times \frac{-2}{17}$$

$$C = \frac{-15}{-1 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{17}$$

$$C = \frac{15}{17}$$

Corrigé de l'exercice 3

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

$$A = \frac{1}{2} - \frac{-5}{18} \times -18$$

$$A = \frac{1}{2} - \frac{-5}{-1 \times \cancel{18}} \times \frac{1 \times \cancel{18}}{1}$$

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

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

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

$$A = \frac{-9}{2}$$

$$B = \frac{-2}{7} - 9$$

$$B = \frac{-2}{7} - \frac{9}{1}$$

$$B = \frac{-2}{7} - \frac{9 \times 7}{1 \times 7}$$

$$B = \frac{-2}{7} - \frac{63}{7}$$

$$B = \frac{-2}{7} - \frac{63}{7}$$

$$B = \frac{-2}{7} - \frac{63}{7}$$

$$B = \frac{-65}{7} \div \frac{-57}{7}$$

$$B = \frac{-65}{7} \times \frac{-7}{57}$$

$$B = \frac{-65}{-1 \times \cancel{7}} \times \frac{1 \times \cancel{7}}{57}$$

$$B = \frac{65}{57}$$

$$C = \frac{-4}{7} \div \left(\frac{2}{11} - \frac{-6}{13} \right)$$

$$C = \frac{-4}{7} \div \left(\frac{2 \times 13}{11 \times 13} - \frac{-6 \times 11}{13 \times 11} \right)$$

$$C = \frac{-4}{7} \div \left(\frac{26}{143} - \frac{-66}{143} \right)$$

$$C = \frac{-4}{7} \div \frac{92}{143}$$

$$C = \frac{-4}{7} \times \frac{143}{92}$$

$$C = \frac{-1 \times \cancel{4}}{7} \times \frac{143}{23 \times \cancel{4}}$$

$$C = \frac{-143}{161}$$

Corrigé de l'exercice 4

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

$$A = -1 - \frac{-8}{21} \times \frac{28}{5}$$

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

$$A = -1 - \frac{-32}{15}$$

$$A = \frac{-1 \times 15}{1 \times 15} - \frac{-32}{15}$$

$$A = \frac{-15}{15} - \frac{-32}{15}$$

$$A = \frac{17}{15}$$

$$B = \frac{7}{10} \times \left(\frac{-2}{5} - \frac{5}{6} \right)$$

$$B = \frac{7}{10} \times \left(\frac{-2 \times 6}{5 \times 6} - \frac{5 \times 5}{6 \times 5} \right)$$

$$B = \frac{7}{10} \times \left(\frac{-12}{30} - \frac{25}{30} \right)$$

$$B = \frac{7}{10} \times \frac{-37}{30}$$

$$B = \frac{7}{-10 \times \cancel{1}} \times \frac{37 \times \cancel{1}}{30}$$

$$B = \frac{-259}{300}$$

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

$$C = \frac{\frac{9}{2} - \frac{2 \times 2}{1 \times 2}}{-1 - \frac{3 \times 10}{1 \times 10}}$$

$$C = \frac{\frac{9}{2} - \frac{4}{2}}{-1 - \frac{30}{10}}$$

$$C = \frac{\frac{5}{2} - \frac{31}{10}}{-1 - 3}$$

$$C = \frac{5}{2} \div \frac{-31}{10}$$

$$C = \frac{5}{2} \times \frac{-10}{31}$$

$$C = \frac{5}{-1 \times \cancel{2}} \times \frac{5 \times \cancel{2}}{31}$$

$$C = \frac{-25}{31}$$

Corrigé de l'exercice 5

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

$$A = \frac{\frac{-3}{8} + 6}{\frac{-3}{5} + 10}$$

$$A = \frac{\frac{-3}{8} + \frac{6 \times 8}{1 \times 8}}{\frac{-3}{5} + \frac{10 \times 5}{1 \times 5}}$$

$$A = \frac{\frac{-3}{8} + \frac{48}{8}}{\frac{-3}{5} + \frac{50}{5}}$$

$$A = \frac{45}{8} \div \frac{47}{5}$$

$$A = \frac{45}{8} \times \frac{5}{47}$$

$$A =$$

$$A = \frac{225}{376}$$

$$B = \frac{9}{10} \div \left(\frac{6}{5} - \frac{-12}{11} \right)$$

$$B = \frac{9}{10} \div \left(\frac{6 \times 11}{5 \times 11} - \frac{-12 \times 5}{11 \times 5} \right)$$

$$B = \frac{9}{10} \div \left(\frac{66}{55} - \frac{-60}{55} \right)$$

$$B = \frac{9}{10} \div \frac{126}{55}$$

$$B = \frac{9}{10} \times \frac{55}{126}$$

$$B = \frac{1 \times \cancel{9}}{2 \times \cancel{5}} \times \frac{11 \times \cancel{5}}{14 \times \cancel{9}}$$

$$B = \frac{11}{28}$$

$$C = 6 - \frac{-2}{7} \div \frac{16}{9}$$

$$C = 6 - \frac{-2}{7} \times \frac{9}{16}$$

$$C = 6 - \frac{-1 \times \cancel{2}}{7} \times \frac{9}{8 \times \cancel{2}}$$

$$C = 6 - \frac{-9}{56}$$

$$C = \frac{6 \times 56}{1 \times 56} - \frac{-9}{56}$$

$$C = \frac{336}{56} - \frac{-9}{56}$$

$$C = \frac{345}{56}$$

Corrigé de l'exercice 6

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

$$A = \frac{-2}{9} \div \left(\frac{11}{2} + \frac{-13}{3} \right)$$

$$A = \frac{-2}{9} \div \left(\frac{11 \times 3}{2 \times 3} + \frac{-13 \times 2}{3 \times 2} \right)$$

$$A = \frac{-2}{9} \div \left(\frac{33}{6} + \frac{-26}{6} \right)$$

$$A = \frac{-2}{9} \div \frac{7}{6}$$

$$A = \frac{-2}{9} \times \frac{6}{7}$$

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

$$A = \frac{-4}{21}$$

$$B = 28 + \frac{-4}{7} \div \frac{7}{9}$$

$$B = 28 + \frac{-4}{7} \times \frac{9}{7}$$

$$B = 28 + \frac{-36}{49}$$

$$B = \frac{28 \times 49}{1 \times 49} + \frac{-36}{49}$$

$$B = \frac{1372}{49} + \frac{-36}{49}$$

$$B = \frac{1336}{49}$$

$$C = \frac{-8}{9} - 1$$

$$C = \frac{-8}{9} + 6$$

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

$$C = \frac{-8}{9} + \frac{6 \times 5}{1 \times 5}$$

$$C = \frac{-8}{9} - \frac{9}{9}$$

$$C = \frac{-8}{9} + \frac{30}{30}$$

$$C = \frac{-17}{9} \div \frac{38}{5}$$

$$C = \frac{-17}{9} \times \frac{5}{38}$$

$$C =$$

$$C = \frac{-85}{342}$$