

Corrigé de l'exercice 1

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

$$A = \frac{3}{2} \times \left(\frac{11}{4} - \frac{12}{5} \right)$$

$$A = \frac{3}{2} \times \left(\frac{11 \times 5}{4 \times 5} - \frac{12 \times 4}{5 \times 4} \right)$$

$$A = \frac{3}{2} \times \left(\frac{55}{20} - \frac{48}{20} \right)$$

$$A = \frac{3}{2} \times \frac{7}{20}$$

$$A =$$

$$A = \frac{21}{40}$$

$$B = \frac{-10}{3} + \frac{5}{108} \div \frac{35}{72}$$

$$B = \frac{-10}{3} + \frac{5}{108} \times \frac{72}{35}$$

$$B = \frac{-10}{3} + \frac{1 \times \cancel{5}}{3 \times \cancel{36}} \times \frac{2 \times \cancel{36}}{7 \times \cancel{5}}$$

$$B = \frac{-10}{3} + \frac{2}{21}$$

$$B = \frac{-10 \times 7}{3 \times 7} + \frac{2}{21}$$

$$B = \frac{-70}{21} + \frac{2}{21}$$

$$B = \frac{-68}{21}$$

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

$$\frac{5}{2} + 1$$

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

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

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

$$C = \frac{17}{2} + \frac{2}{2}$$

$$C = \frac{17}{2} \div \frac{5}{2}$$

$$C = \frac{17}{2} \times \frac{2}{5}$$

$$C = \frac{17}{1 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{5}$$

$$C = \frac{17}{5}$$

Corrigé de l'exercice 2

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

$$A = \frac{\frac{4}{3} - 7}{-7 - 2}$$

$$A = \frac{\frac{4}{3} - \frac{7 \times 3}{1 \times 3}}{-7 - \frac{2 \times 9}{1 \times 9}}$$

$$A = \frac{\frac{4}{3} - \frac{21}{3}}{-7 - \frac{18}{9}}$$

$$A = \frac{-17}{3} \div \frac{-25}{9}$$

$$A = \frac{-17}{3} \times \frac{-9}{25}$$

$$A = \frac{-17}{-1 \times \cancel{3}} \times \frac{3 \times \cancel{3}}{25}$$

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

$$B = \frac{9}{7} \div \left(\frac{-7}{3} - \frac{-9}{10} \right)$$

$$B = \frac{9}{7} \div \left(\frac{-7 \times 10}{3 \times 10} - \frac{-9 \times 3}{10 \times 3} \right)$$

$$B = \frac{9}{7} \div \left(\frac{-70}{30} - \frac{-27}{30} \right)$$

$$B = \frac{9}{7} \div \frac{-43}{30}$$

$$B = \frac{9}{7} \times \frac{-30}{43}$$

$$B = \frac{9}{-7 \times \cancel{1}} \times \frac{30 \times \cancel{1}}{43}$$

$$B = \frac{-270}{301}$$

$$C = \frac{27}{8} + \frac{-21}{64} \div \frac{-3}{28}$$

$$C = \frac{27}{8} + \frac{-21}{64} \times \frac{-28}{3}$$

$$C = \frac{27}{8} + \frac{-7 \times \cancel{3}}{-16 \times \cancel{4}} \times \frac{7 \times \cancel{4}}{1 \times \cancel{3}}$$

$$C = \frac{27}{8} + \frac{49}{16}$$

$$C = \frac{27 \times 2}{8 \times 2} + \frac{49}{16}$$

$$C = \frac{54}{16} + \frac{49}{16}$$

$$C = \frac{103}{16}$$

Corrigé de l'exercice 3

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

$$A = \frac{10}{9} \times \left(\frac{13}{6} - \frac{10}{7} \right)$$

$$A = \frac{10}{9} \times \left(\frac{13 \times 7}{6 \times 7} - \frac{10 \times 6}{7 \times 6} \right)$$

$$A = \frac{10}{9} \times \left(\frac{91}{42} - \frac{60}{42} \right)$$

$$A = \frac{10}{9} \times \frac{31}{42}$$

$$A = \frac{5 \times 2}{9} \times \frac{31}{21 \times 2}$$

$$A = \frac{155}{189}$$

$$B = \frac{-1}{3} - \frac{-2}{3} \times \frac{-9}{4}$$

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

$$B = \frac{-1}{3} - \frac{3}{2}$$

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

$$B = \frac{-2}{6} - \frac{9}{6}$$

$$B = \frac{-11}{6}$$

$$C = \frac{\frac{3}{5} + 5}{\frac{-1}{9} + 8}$$

$$C = \frac{\frac{3}{5} + \frac{5 \times 5}{1 \times 5}}{\frac{-1}{9} + \frac{8 \times 9}{1 \times 9}}$$

$$C = \frac{\frac{3}{5} + \frac{25}{5}}{\frac{-1}{9} + \frac{72}{9}}$$

$$C = \frac{28}{5} \div \frac{71}{9}$$

$$C = \frac{28}{5} \times \frac{9}{71}$$

$$C =$$

$$C = \frac{252}{355}$$

Corrigé de l'exercice 4

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

$$A = \frac{\frac{-1}{3} - 5}{\frac{10}{9} - 4}$$

$$A = \frac{\frac{-1}{3} - \frac{5 \times 3}{1 \times 3}}{\frac{10}{9} - \frac{4 \times 9}{1 \times 9}}$$

$$A = \frac{\frac{-1}{3} - \frac{15}{3}}{\frac{10}{9} - \frac{36}{9}}$$

$$A = \frac{-16}{3} \div \frac{-26}{9}$$

$$A = \frac{-16}{3} \times \frac{-9}{26}$$

$$A = \frac{-8 \times 2}{-1 \times 3} \times \frac{3 \times 3}{13 \times 2}$$

$$A = \frac{24}{13}$$

$$B = \frac{-15}{2} + \frac{-5}{6} \div \frac{1}{6}$$

$$B = \frac{-15}{2} + \frac{-5}{6} \times 6$$

$$B = \frac{-15}{2} + \frac{-5}{1 \times 6} \times \frac{1 \times 6}{1}$$

$$B = \frac{-15}{2} + -5$$

$$B = \frac{-15}{2} + \frac{-5 \times 2}{1 \times 2}$$

$$B = \frac{-15}{2} + \frac{-10}{2}$$

$$B = \frac{-25}{2}$$

$$C = \frac{-1}{9} \times \left(\frac{-13}{8} - \frac{-7}{5} \right)$$

$$C = \frac{-1}{9} \times \left(\frac{-13 \times 5}{8 \times 5} - \frac{-7 \times 8}{5 \times 8} \right)$$

$$C = \frac{-1}{9} \times \left(\frac{-65}{40} - \frac{-56}{40} \right)$$

$$C = \frac{-1}{9} \times \frac{-9}{40}$$

$$C = \frac{-1}{-1 \times 9} \times \frac{1 \times 9}{40}$$

$$C = \frac{1}{40}$$

Corrigé de l'exercice 5

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

$$A = \frac{-2}{5} \div \left(\frac{1}{2} - \frac{-12}{11} \right)$$

$$A = \frac{-2}{5} \div \left(\frac{1 \times 11}{2 \times 11} - \frac{-12 \times 2}{11 \times 2} \right)$$

$$A = \frac{-2}{5} \div \left(\frac{11}{22} - \frac{-24}{22} \right)$$

$$A = \frac{-2}{5} \div \frac{35}{22}$$

$$A = \frac{-2}{5} \times \frac{22}{35}$$

$$A =$$

$$A = \frac{-44}{175}$$

$$B = \frac{-30}{7} + \frac{90}{49} \div \frac{-50}{21}$$

$$B = \frac{-30}{7} + \frac{90}{49} \times \frac{-21}{50}$$

$$B = \frac{-30}{7} + \frac{9 \times \cancel{10}}{-7 \times \cancel{7}} \times \frac{3 \times \cancel{7}}{5 \times \cancel{10}}$$

$$B = \frac{-30}{7} + \frac{-27}{35}$$

$$B = \frac{-30 \times 5}{7 \times 5} + \frac{-27}{35}$$

$$B = \frac{-150}{35} + \frac{-27}{35}$$

$$B = \frac{-177}{35}$$

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

$$\frac{2}{4} - 10$$

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

$$C = \frac{2}{5} - \frac{10 \times 4}{1 \times 4}$$

$$C = \frac{2}{3} + \frac{30}{3}$$

$$C = \frac{2}{5} - \frac{40}{4}$$

$$C = \frac{32}{3} \div \frac{-35}{4}$$

$$C = \frac{32}{3} \times \frac{-4}{35}$$

$$C = \frac{32}{-3 \times \cancel{1}} \times \frac{4 \times \cancel{1}}{35}$$

$$C = \frac{32}{-3} \times \frac{4}{35}$$

$$C = \frac{-128}{105}$$

Corrigé de l'exercice 6

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

$$A = \frac{-21}{20} - \frac{-7}{40} \div \frac{-35}{8}$$

$$A = \frac{-21}{20} - \frac{-7}{40} \times \frac{-8}{35}$$

$$A = \frac{-21}{20} - \frac{-1 \times \cancel{7}}{-5 \times \cancel{8}} \times \frac{1 \times \cancel{8}}{5 \times \cancel{7}}$$

$$A = \frac{-21}{20} - \frac{1}{25}$$

$$A = \frac{-21 \times 5}{20 \times 5} - \frac{1 \times 4}{25 \times 4}$$

$$A = \frac{-105}{100} - \frac{4}{100}$$

$$A = \frac{-109}{100}$$

$$B = \frac{6}{5} \div \left(\frac{-1}{2} + \frac{4}{3} \right)$$

$$B = \frac{6}{5} \div \left(\frac{-1 \times 3}{2 \times 3} + \frac{4 \times 2}{3 \times 2} \right)$$

$$B = \frac{6}{5} \div \left(\frac{-3}{6} + \frac{8}{6} \right)$$

$$B = \frac{6}{5} \div \frac{5}{6}$$

$$B = \frac{6}{5} \times \frac{6}{5}$$

$$B =$$

$$B = \frac{36}{25}$$

$$C = \frac{3}{4} - 10$$

$$\frac{3}{7} - 8$$

$$C = \frac{3}{4} - \frac{10 \times 4}{1 \times 4}$$

$$C = \frac{3}{7} - \frac{40}{7}$$

$$C = \frac{3}{7} - \frac{40}{7}$$

$$C = \frac{3}{10} - \frac{40}{10}$$

$$C = \frac{-37}{4} \div \frac{-73}{10}$$

$$C = \frac{-37}{4} \times \frac{-10}{73}$$

$$C = \frac{-37}{-2 \times \cancel{2}} \times \frac{5 \times \cancel{2}}{73}$$

$$C = \frac{185}{146}$$