

Corrigé de l'exercice 1

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

$$A = \frac{-12}{11} - \frac{20}{99} \div \frac{20}{33}$$

$$A = \frac{-12}{11} - \frac{20}{99} \times \frac{33}{20}$$

$$A = \frac{-12}{11} - \frac{1 \times \cancel{20}}{3 \times \cancel{33}} \times \frac{1 \times \cancel{33}}{1 \times \cancel{20}}$$

$$A = \frac{-12}{11} - \frac{1}{3}$$

$$A = \frac{-12 \times 3}{11 \times 3} - \frac{1 \times 11}{3 \times 11}$$

$$A = \frac{-36}{33} - \frac{11}{33}$$

$$A = \frac{-47}{33}$$

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

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

$$B = \frac{-5}{4} \div \left(\frac{65}{40} - \frac{-64}{40} \right)$$

$$B = \frac{-5}{4} \div \frac{129}{40}$$

$$B = \frac{-5}{4} \times \frac{40}{129}$$

$$B = \frac{-5}{1 \times \cancel{4}} \times \frac{10 \times \cancel{4}}{129}$$

$$B = \frac{-50}{129}$$

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

$$\frac{7}{3} + 6$$

$$C = \frac{7}{2} + \frac{10 \times 2}{1 \times 2}$$

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

$$C = \frac{7}{4} + \frac{20}{18}$$

$$\frac{7}{3} + \frac{20}{3}$$

$$C = \frac{27}{2} \div \frac{22}{3}$$

$$C = \frac{27}{2} \times \frac{3}{22}$$

$$C =$$

$$C = \frac{81}{44}$$

Corrigé de l'exercice 2

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

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

$$A = 9 + \frac{-7}{50}$$

$$A = \frac{9 \times 50}{1 \times 50} + \frac{-7}{50}$$

$$A = \frac{450}{50} + \frac{-7}{50}$$

$$A = \frac{443}{50}$$

$$B = \frac{\frac{8}{3} + 5}{-2}$$

$$\frac{-2}{3} + 1$$

$$B = \frac{\frac{8}{3} + \frac{5 \times 3}{1 \times 3}}{-2 + \frac{1 \times 3}{1 \times 3}}$$

$$\frac{8}{3} + \frac{15}{3}$$

$$B = \frac{\frac{8}{3} + \frac{15}{3}}{\frac{-2}{3} + \frac{3}{3}}$$

$$\frac{23}{3} \div \frac{1}{3}$$

$$B = \frac{23}{3} \times 3$$

$$B = \frac{23}{1 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{1}$$

$$B = 23$$

$$C = \frac{5}{4} \div \left(\frac{-2}{9} + \frac{5}{8} \right)$$

$$C = \frac{5}{4} \div \left(\frac{-2 \times 8}{9 \times 8} + \frac{5 \times 9}{8 \times 9} \right)$$

$$C = \frac{5}{4} \div \left(\frac{-16}{72} + \frac{45}{72} \right)$$

$$C = \frac{5}{4} \div \frac{29}{72}$$

$$C = \frac{5}{4} \times \frac{72}{29}$$

$$C = \frac{5}{1 \times \cancel{4}} \times \frac{18 \times \cancel{4}}{29}$$

$$C = \frac{90}{29}$$

Corrigé de l'exercice 3

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

$$A = \frac{4}{3} \div \left(\frac{1}{6} - \frac{13}{5} \right)$$

$$A = \frac{4}{3} \div \left(\frac{1 \times 5}{6 \times 5} - \frac{13 \times 6}{5 \times 6} \right)$$

$$A = \frac{4}{3} \div \left(\frac{5}{30} - \frac{78}{30} \right)$$

$$A = \frac{4}{3} \div \frac{-73}{30}$$

$$A = \frac{4}{3} \times \frac{-30}{73}$$

$$A = \frac{4}{-1 \times \cancel{3}} \times \frac{10 \times \cancel{3}}{73}$$

$$A = \frac{-40}{73}$$

$$B = \frac{\frac{4}{7} - 2}{-7} + 1$$

$$B = \frac{\frac{4}{7} - \frac{2 \times 7}{1 \times 7}}{-7} + \frac{1 \times 8}{1 \times 8}$$

$$B = \frac{\frac{4}{7} - \frac{14}{7}}{-7} + \frac{8}{8}$$

$$B = \frac{-10}{7} \div \frac{1}{8}$$

$$B = \frac{-10}{7} \times 8$$

$$B =$$

$$B = \frac{-80}{7}$$

$$C = 9 - \frac{9}{10} \times \frac{80}{27}$$

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

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

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

$$C = \frac{27}{3} - \frac{8}{3}$$

$$C = \frac{19}{3}$$

Corrigé de l'exercice 4

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

$$A = \frac{\frac{9}{4} - 8}{\frac{-1}{2} - 2}$$

$$A = \frac{\frac{9}{4} - \frac{8 \times 4}{1 \times 4}}{\frac{-1}{2} - \frac{2 \times 2}{1 \times 2}}$$

$$A = \frac{\frac{9}{4} - \frac{32}{4}}{\frac{-1}{2} - \frac{4}{2}}$$

$$A = \frac{-23}{4} \div \frac{-5}{2}$$

$$A = \frac{-23}{4} \times \frac{2}{5}$$

$$A = \frac{-23}{-2 \times \cancel{2}} \times \frac{1 \times \cancel{2}}{5}$$

$$A = \frac{23}{10}$$

$$B = -63 - \frac{-7}{5} \times \frac{3}{28}$$

$$B = -63 - \frac{-1 \times \cancel{7}}{5} \times \frac{3}{4 \times \cancel{7}}$$

$$B = -63 - \frac{-3}{20}$$

$$B = \frac{-63 \times 20}{1 \times 20} - \frac{-3}{20}$$

$$B = \frac{-1260}{20} - \frac{-3}{20}$$

$$B = \frac{-1257}{20}$$

$$C = \frac{-1}{3} \div \left(\frac{1}{5} + \frac{6}{7} \right)$$

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

$$C = \frac{-1}{3} \div \left(\frac{7}{35} + \frac{30}{35} \right)$$

$$C = \frac{-1}{3} \div \frac{37}{35}$$

$$C = \frac{-1}{3} \times \frac{35}{37}$$

$$C =$$

$$C = \frac{-35}{111}$$

Corrigé de l'exercice 5

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

$$A = \frac{-32}{7} - \frac{8}{21} \times \frac{49}{24}$$

$$A = \frac{-32}{7} - \frac{1 \times 8}{3 \times 3} \times \frac{7 \times 7}{3 \times 8}$$

$$A = \frac{-32}{7} - \frac{7}{9}$$

$$A = \frac{-32 \times 9}{7 \times 9} - \frac{7 \times 7}{9 \times 7}$$

$$A = \frac{-288}{63} - \frac{49}{63}$$

$$A = \frac{-337}{63}$$

$$B = \frac{7}{8} \div \left(\frac{-7}{9} - \frac{-11}{8} \right)$$

$$B = \frac{7}{8} \div \left(\frac{-7 \times 8}{9 \times 8} - \frac{-11 \times 9}{8 \times 9} \right)$$

$$B = \frac{7}{8} \div \left(\frac{-56}{72} - \frac{-99}{72} \right)$$

$$B = \frac{7}{8} \div \frac{43}{72}$$

$$B = \frac{7}{8} \times \frac{72}{43}$$

$$B = \frac{7}{1 \times 8} \times \frac{9 \times 8}{43}$$

$$B = \frac{63}{43}$$

$$C = \frac{\frac{-1}{2} + 9}{-7 - 5}$$

$$C = \frac{\frac{-1}{2} + \frac{9 \times 2}{1 \times 2}}{\frac{-7}{5} - \frac{5 \times 5}{1 \times 5}}$$

$$C = \frac{\frac{-1}{2} + \frac{18}{2}}{\frac{-7}{5} - \frac{25}{5}}$$

$$C = \frac{17}{2} \div \frac{-32}{5}$$

$$C = \frac{17}{2} \times \frac{-5}{32}$$

$$C = \frac{17}{-2 \times -1} \times \frac{5 \times -1}{32}$$

$$C = \frac{-85}{64}$$

Corrigé de l'exercice 6

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

$$A = \frac{25}{13} - \frac{-2}{13} \times \frac{13}{5}$$

$$A = \frac{25}{13} - \frac{-2}{1 \times 13} \times \frac{1 \times 13}{5}$$

$$A = \frac{25}{13} - \frac{-2}{5}$$

$$A = \frac{25 \times 5}{13 \times 5} - \frac{-2 \times 13}{5 \times 13}$$

$$A = \frac{125}{65} - \frac{-26}{65}$$

$$A = \frac{151}{65}$$

$$B = \frac{\frac{10}{7} + 5}{\frac{-5}{9} + 8}$$

$$B = \frac{\frac{10}{7} + \frac{5 \times 7}{1 \times 7}}{\frac{-5}{9} + \frac{8 \times 9}{1 \times 9}}$$

$$B = \frac{\frac{10}{7} + \frac{35}{7}}{\frac{-5}{9} + \frac{72}{9}}$$

$$B = \frac{45}{7} \div \frac{67}{9}$$

$$B = \frac{45}{7} \times \frac{9}{67}$$

$$B =$$

$$B = \frac{405}{469}$$

$$C = \frac{5}{4} \times \left(\frac{9}{2} + \frac{-8}{3} \right)$$

$$C = \frac{5}{4} \times \left(\frac{9 \times 3}{2 \times 3} + \frac{-8 \times 2}{3 \times 2} \right)$$

$$C = \frac{5}{4} \times \left(\frac{27}{6} + \frac{-16}{6} \right)$$

$$C = \frac{5}{4} \times \frac{11}{6}$$

$$C =$$

$$C = \frac{55}{24}$$