Corrigé de l'exercice 1

Compléter :

▶1. $\dfrac{2}{16} = \dfrac{1_{(\times 2)}}{\mathbf{8}_{(\times 2)}}$

▶2. $\dfrac{5_{(\times 6)}}{10_{(\times 6)}} = \dfrac{\mathbf{30}}{60}$

▶3. $\dfrac{14}{18} = \dfrac{\mathbf{7}_{(\times 2)}}{9_{(\times 2)}}$

▶4. $\dfrac{\mathbf{70}}{35} = \dfrac{10_{(\times 7)}}{5_{(\times 7)}}$

▶5. $\dfrac{20}{24} = \dfrac{5_{(\times 4)}}{\mathbf{6}_{(\times 4)}}$

▶6. $\dfrac{42}{\mathbf{70}} = \dfrac{6_{(\times 7)}}{10_{(\times 7)}}$

▶7. $\dfrac{7_{(\times 10)}}{\mathbf{5}_{(\times 10)}} = \dfrac{70}{50}$

▶8. $\dfrac{27}{81} = \dfrac{\mathbf{3}_{(\times 9)}}{9_{(\times 9)}}$

Corrigé de l'exercice 2

Calculer en détaillant les étapes. Donner le résultat sous la forme d'une fraction la plus simple possible (ou d'un entier lorsque c'est possible).

▶1. $A = \dfrac{12}{35} \times \dfrac{5}{42}$

$A = \dfrac{\cancel{6} \times 2 \times \cancel{5}}{\cancel{5} \times 7 \times \cancel{6} \times 7}$

$A = \dfrac{2}{49}$

▶2. $B = \dfrac{48}{35} \times \dfrac{35}{72}$

$B = \dfrac{\cancel{24} \times 2 \times \cancel{35}}{\cancel{35} \times \cancel{24} \times 3}$

$B = \dfrac{2}{3}$

▶3. $C = \dfrac{81}{70} \times \dfrac{49}{45}$

$C = \dfrac{\cancel{9} \times 9 \times \cancel{7} \times 7}{\cancel{7} \times 10 \times \cancel{9} \times 5}$

$C = \dfrac{63}{50}$

▶4. $D = \dfrac{7}{16} \times \dfrac{2}{3}$

$D = \dfrac{7 \times \cancel{2}}{\cancel{2} \times 8 \times 3}$

$D = \dfrac{7}{24}$

Corrigé de l'exercice 3

Calculer en détaillant les étapes. Donner le résultat sous la forme d'une fraction la plus simple possible (ou d'un entier lorsque c'est possible).

▶1. $A = 5 - \dfrac{3}{3}$

$A = \dfrac{5_{\times 3}}{1_{\times 3}} - \dfrac{3}{3}$

$A = \dfrac{15}{3} - \dfrac{3}{3}$

$A = \dfrac{12}{3}$

$A = \dfrac{4 \times \cancel{3}}{1 \times \cancel{3}}$

$A = 4$

▶2. $B = 1 - \dfrac{6}{8}$

$B = \dfrac{1_{\times 8}}{1_{\times 8}} - \dfrac{6}{8}$

$B = \dfrac{8}{8} - \dfrac{6}{8}$

$B = \dfrac{2}{8}$

$B = \dfrac{1 \times \cancel{2}}{4 \times \cancel{2}}$

$B = \dfrac{1}{4}$

▶3. $C = \dfrac{1}{9} + 3$

$C = \dfrac{1}{9} + \dfrac{3_{\times 9}}{1_{\times 9}}$

$C = \dfrac{1}{9} + \dfrac{27}{9}$

$C = \dfrac{28}{9}$

▶4. $D = \dfrac{5}{9} + 1$

$D = \dfrac{5}{9} + \dfrac{1_{\times 9}}{1_{\times 9}}$

$D = \dfrac{5}{9} + \dfrac{9}{9}$

$D = \dfrac{14}{9}$

▶5. $E = \dfrac{6}{72} + \dfrac{6}{9}$

$E = \dfrac{6}{72} + \dfrac{6_{\times 8}}{9_{\times 8}}$

$E = \dfrac{6}{72} + \dfrac{48}{72}$

$E = \dfrac{54}{72}$

$E = \dfrac{3 \times \cancel{18}}{4 \times \cancel{18}}$

$E = \dfrac{3}{4}$

▶6. $F = \dfrac{1}{50} - \dfrac{7}{10}$

$F = \dfrac{1}{50} - \dfrac{7_{\times 5}}{10_{\times 5}}$

$F = \dfrac{1}{50} - \dfrac{35}{50}$

$F = \dfrac{-34}{50}$

$F = \dfrac{-17 \times \cancel{2}}{25 \times \cancel{2}}$

$F = \dfrac{-17}{25}$

▶7. $G = \dfrac{4}{100} - \dfrac{8}{10}$

$G = \dfrac{4}{100} - \dfrac{8_{\times 10}}{10_{\times 10}}$

$G = \dfrac{4}{100} - \dfrac{80}{100}$

$G = \dfrac{-76}{100}$

$G = \dfrac{-19 \times \cancel{4}}{25 \times \cancel{4}}$

$G = \dfrac{-19}{25}$

▶8. $H = \dfrac{5}{8} + \dfrac{7}{8}$

$H = \dfrac{12}{8}$

$H = \dfrac{3 \times \cancel{4}}{2 \times \cancel{4}}$

$H = \dfrac{3}{2}$

Corrigé de l'exercice 4

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

$$A = -18 + \frac{9}{4} \times -1$$

$$A = -18 + \frac{9}{-4 \times \cancel{-1}} \times \frac{1 \times \cancel{-1}}{1}$$

$$A = -18 + \frac{-9}{4}$$

$$A = \frac{-18_{\times 4}}{1_{\times 4}} + \frac{-9}{4}$$

$$A = \frac{-72}{4} + \frac{-9}{4}$$

$$\boxed{A = \frac{-81}{4}}$$

$$B = \frac{-5}{4} \div \left(\frac{-11}{8} - \frac{-5}{9} \right)$$

$$B = \frac{-5}{4} \div \left(\frac{-11_{\times 9}}{8_{\times 9}} - \frac{-5_{\times 8}}{9_{\times 8}} \right)$$

$$B = \frac{-5}{4} \div \left(\frac{-99}{72} - \frac{-40}{72} \right)$$

$$B = \frac{-5}{4} \div \frac{-59}{72}$$

$$B = \frac{-5}{4} \times \frac{-72}{59}$$

$$B = \frac{-5}{-1 \times \cancel{-4}} \times \frac{18 \times \cancel{-4}}{59}$$

$$\boxed{B = \frac{90}{59}}$$

$$C = \frac{\frac{9}{2} + 4}{\frac{-9}{4} - 7}$$

$$C = \frac{\frac{9}{2} + \frac{4_{\times 2}}{1_{\times 2}}}{\frac{-9}{4} - \frac{7_{\times 4}}{1_{\times 4}}}$$

$$C = \frac{\frac{9}{2} + \frac{8}{2}}{\frac{-9}{4} - \frac{28}{4}}$$

$$C = \frac{17}{2} \div \frac{-37}{4}$$

$$C = \frac{17}{2} \times \frac{-4}{37}$$

$$C = \frac{17}{-1 \times \cancel{-2}} \times \frac{2 \times \cancel{-2}}{37}$$

$$\boxed{C = \frac{-34}{37}}$$