Exercices chapitre 7 (manuel) corrigés

Exercice 38 p 67

1) $\frac{8}{3} \div \frac{5}{4} = \frac{8}{3} \times \frac{4}{5} = \frac{32}{15}$

2) $\frac{3}{7} \div \frac{-4}{5} = \frac{3}{7} \times \frac{5}{-4} = \frac{15}{-28}$ $\left(= -\frac{15}{28}\right)$

3) $\frac{5}{8} \div 9 = \frac{5}{8} \times \frac{1}{9} = \frac{5}{72}$

Exercice 39 p 67

1) $A = \frac{7}{5} \div \frac{9}{2} = \frac{7}{5} \times \frac{2}{9} = \frac{14}{45}$

2) $B = \frac{4}{7} \div \frac{-5}{3} = \frac{4}{7} \times \frac{3}{-5} = \frac{12}{-35} = -\frac{12}{35}$

3) $C = \frac{-11}{6} \div \frac{4}{3} = \frac{-11}{6} \times \frac{3}{4} = \frac{-11}{2 \times \cancel{3}} \times \frac{\cancel{3}}{4} = \frac{-11}{8}$

4) $D = \frac{-1}{4} \div \frac{2}{-7} = \frac{1}{4} \times \frac{7}{2} = \frac{7}{8}$

Exercice 40 p 67

1) $\frac{\frac{1}{2} \div \frac{3}{4}}{\frac{3}{4}} = \frac{\frac{1}{2}}{\frac{3}{4}}$

2) $\frac{\frac{5}{6} \div \frac{7}{8}}{\frac{7}{8}} = \frac{\frac{5}{6}}{\frac{7}{8}}$

3) $\left(\frac{9}{10} + \frac{11}{12}\right) \div \frac{13}{14} = \frac{\frac{9}{10} + \frac{11}{12}}{\frac{13}{14}}$

4) $\frac{15}{16} \div \left(\frac{17}{18} - \frac{19}{20}\right) = \frac{\frac{15}{16}}{\frac{17}{18} - \frac{19}{20}}$

Exercice 45 p 67

1) $P = \left(\frac{14}{3} - \frac{3}{9}\right) \times \frac{-3}{4} = \left(\frac{14}{3} - \frac{3 \times 1}{3 \times 3}\right) \times \frac{-3}{4} = \left(\frac{14}{3} - \frac{1}{3}\right) \times \frac{-3}{4} = \frac{13}{3} \times \frac{-3}{4} = \frac{-13 \times \cancel{3}}{\cancel{3} \times 4}$

Donc $P = -\frac{13}{4}$

2) $R = \frac{4}{7} - \frac{3}{7} \div \frac{8}{3} = \frac{4}{7} - \frac{3}{7} \times \frac{3}{8} = \frac{4}{7} - \frac{9}{56} = \frac{4\times8}{7\times8} - \frac{9}{56} = \frac{32}{56} - \frac{9}{56}$

Donc $R = \frac{23}{56}$

3) $S = \frac{5}{11} \times \frac{4}{7} \div \frac{15}{22} = \frac{5\times4}{11\times7} \times \frac{22}{15} = \frac{5\times4\times22}{11\times7\times15}$

d'où $S = \frac{5\times4\times2\times11}{11\times7\times3\times5} = \frac{4\times2}{7\times3} = \frac{8}{21}$.

4) $T = \frac{3}{5} \times \frac{3}{8} - \frac{1}{4} \div \frac{5}{7} = \frac{3\times3}{5\times8} - \frac{1}{4} \times \frac{7}{5} = \frac{9}{40} - \frac{7}{20} = \frac{9}{40} - \frac{7\times2}{20\times2}$

donc $T = \frac{9}{40} - \frac{14}{40} = \frac{-5}{40} = \frac{-1}{8}$.

5) $U = \frac{\frac{1}{3} + \frac{4}{5}}{\frac{14}{6}} = \frac{\frac{3}{5} + \frac{4}{5}}{\frac{7}{3}} = \frac{7}{5} \div \frac{7}{3} = \frac{7}{5} \times \frac{3}{7} = \frac{3}{3\times3} = \frac{1}{3}$.

6) $V = \frac{\frac{5}{6} \div \frac{4}{3}}{\frac{5}{2} \times \frac{7}{4}} = \frac{\frac{5}{6} \times \frac{3}{4}}{\frac{35}{8}} = \frac{15}{24} \div \frac{35}{8} = \frac{5}{8} \times \frac{8}{35} = \frac{5}{35} = \frac{1}{7}$.

Exercice 64 p 70

	$\frac{27}{98}$	
$-\frac{3}{7}$		$\frac{-14}{9}$
$\frac{3}{5}$	$\frac{-7}{5}$	$\frac{9}{10}$

$\frac{3}{5} \div \frac{-7}{5} = \frac{3}{5} \times \frac{5}{-7} = \frac{3}{-7} = \frac{-3}{7}$

$\frac{-7}{5} \div \frac{9}{10} = \frac{-7}{5} \times \frac{10}{9} = \frac{-7}{5} \times \frac{2\times5}{9} = \frac{-14}{9}$

$\frac{-3}{7} \div \frac{-14}{9} = \frac{3}{7} \times \frac{9}{14} = \frac{27}{98}$