

Exercices

exercice 17 :

$$r_1 = \frac{\frac{12}{-11}}{\frac{18}{55}}$$

$$= \frac{12}{-11} \times \frac{55}{18}$$

$$= \frac{12 \times 55}{-11 \times 18}$$

$$= - \frac{\cancel{3} \times 4 \times 5 \times \cancel{11}}{\cancel{11} \times \cancel{3} \times 6}$$

$$= - \frac{4 \times 5}{6}$$

$$= - \frac{2 \times \cancel{2} \times 5}{\cancel{2} \times 3}$$

$$= - \frac{10}{3}.$$

$$r = \frac{\frac{2}{3}}{\frac{-6}{20}}$$

$$= \frac{2}{3} \times \frac{20}{-6}$$

$$= - \frac{2 \times 20}{3 \times 6}$$

$$= - \frac{\cancel{2} \times 2 \times 10}{3 \times \cancel{2} \times 3}$$

$$= - \frac{20}{9} .$$

exercice 41 :

$$L = -\frac{4}{7} \times \frac{5}{6} \times -\frac{3}{7}$$

$$= \frac{4 \times 5 \times 3}{7 \times 6 \times 7} \quad \text{premiers}$$

$$= \frac{\cancel{2} \times 2 \times 5 \times \cancel{3}}{7 \times \cancel{2} \times \cancel{3} \times 7}$$

$$= \frac{10}{49}$$

$$M = \left(\frac{5}{8} - \frac{7}{6} \right) \times \left(\frac{8}{5} - \frac{-3}{35} \right)$$

$$= \left(\frac{5 \times 6 - 8 \times 7}{8 \times 6} \right) \times \left(\frac{8 \times 7}{5 \times 7} - \frac{-3}{35} \right)$$

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$$= \left(\frac{30 - 56}{48} \right) \times \left(\frac{56}{35} - \frac{-3}{35} \right)$$

$$= \frac{-26}{48} \times \left(\frac{56 - (-3)}{35} \right)$$

$$= \frac{-\cancel{2} \times 13}{\cancel{2} \times 24} \times \frac{59}{35}$$

$$= - \frac{13}{24} \times \frac{59}{35}$$

$$= - \frac{13 \times 59}{24 \times 35}$$

$$= - \frac{767}{840}$$

$$\begin{array}{r} 12 \\ 13 \\ \times 59 \\ \hline 117 \\ + 650 \\ \hline 767 \end{array}$$

$$\begin{array}{r} 24 \\ \times 35 \\ \hline + 120 \\ 720 \\ \hline 840 \end{array}$$

Fractions

$$A = -\frac{1}{10} \div \left(\frac{13}{6} - \frac{-3}{5} \right)$$

$$= -\frac{1}{10} \div \left(\frac{13 \times 5 - (-3) \times 6}{6 \times 5} \right)$$

$$= -\frac{1}{10} \div \left(\frac{65 - (-18)}{30} \right)$$

$$= -\frac{1}{10} \div \frac{83}{30}$$

$$= -\frac{1}{10} \times \frac{30}{83}$$

$$= - \frac{1 \times 30}{10 \times 83}$$

$$= - \frac{1 \times 3 \times \cancel{10}}{\cancel{10} \times 83}$$

$$= - \frac{3}{83}$$

$$B = \frac{10}{7} \times \left(-\frac{13}{2} + \frac{12}{7} \right)$$

$$= \frac{10}{7} \times \left(\frac{-13 \times 7 + 12 \times 2}{2 \times 7} \right)$$

$$= \frac{10}{7} \times \left(\frac{-91 + 24}{14} \right)$$

$$= \frac{10}{7} \times \frac{-67}{14}$$

$$= - \frac{10 \times 67}{7 \times 14}$$

$$= - \frac{\cancel{2} \times 5 \times 67}{7 \times 7 \times \cancel{2}}$$

$$\begin{array}{r} 3 \\ 67 \\ \times 5 \\ \hline 335 \end{array}$$

$$= - \frac{335}{49}$$

$$C = \frac{-80}{9} + \frac{100}{27} \div \frac{-4}{3}$$

$$= \frac{-80}{9} + \frac{100}{27} \times \frac{3}{-4}$$

$$= \frac{-80}{9} + \frac{100 \times 3}{27 \times -4}$$

$$= \frac{-80}{9} + - \frac{\cancel{4} \times 25 \times \cancel{3}}{\cancel{3} \times 9 \times \cancel{4}}$$

$$= \frac{-80}{9} + \left(-\frac{25}{9} \right)$$

$$= \frac{-80 + (-25)}{9} = -\frac{105}{9}$$

$$① = -\frac{3}{5} \times \left(-\frac{7}{13} + -\frac{7}{2} \right)$$

$$= -\frac{3}{5} \times \left(\frac{-7 \times 2 + (-7) \times 13}{13 \times 2} \right)$$

$$= -\frac{3}{5} \times \left(\frac{-14 + (-91)}{26} \right)$$

$$= -\frac{3}{5} \times -\frac{105}{26}$$

$$= \frac{3 \times 105}{5 \times 26}$$

$$= \frac{3 \times \cancel{5} \times 21}{\cancel{5} \times 26}$$

$$\begin{array}{r} 21 \\ \times 3 \\ \hline 63 \end{array}$$

$$= \frac{63}{26}$$