

La Providence – Montpellier

CORRIGE – M. QUET

EXERCICE 1:

$A = \frac{19}{100} + \frac{-26}{100} + \frac{51}{100}$ $A = \frac{19 + (-26) + 51}{100}$ $A = \frac{-7 + 51}{100}$ $A = \frac{44}{100}$ $A = \frac{\boxed{4} \times 11}{\boxed{4} \times 20}$ $A = \frac{11}{20}$	$B = \frac{5}{10} + \frac{48}{-100} - \frac{-3}{10}$ $B = \frac{5}{10} - \frac{48}{100} + \frac{3}{10}$ $B = \frac{5 \times 10}{10 \times 10} - \frac{48}{100} + \frac{3 \times 10}{10 \times 10}$ $B = \frac{50}{100} - \frac{48}{100} + \frac{30}{100}$ $B = \frac{32}{100}$ $B = \frac{\boxed{4} \times 8}{\boxed{4} \times 25}$ $B = \frac{8}{25}$	$C = \frac{1}{2} + \frac{2}{3} + \frac{5}{6}$ $C = \frac{1 \times 3}{2 \times 3} + \frac{2 \times 2}{3 \times 2} + \frac{5}{6}$ $C = \frac{3}{6} + \frac{4}{6} + \frac{5}{6}$ $C = \frac{3 + 4 + 5}{6}$ $C = \frac{12}{6}$ $C = 2$	$D = \frac{-4}{3} - \frac{1}{-6} + \frac{-7}{-12}$ $D = -\frac{4}{3} + \frac{1}{6} + \frac{7}{12}$ $D = -\frac{4 \times 4}{3 \times 4} + \frac{1 \times 2}{6 \times 2} + \frac{7}{12}$ $D = -\frac{16}{12} + \frac{2}{12} + \frac{7}{12}$ $D = \frac{-16 + 2 + 7}{12}$ $D = \frac{-14 + 7}{12}$ $D = -\frac{7}{12}$
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$E = \frac{1}{2} + \frac{1}{3} + \frac{1}{5}$ <p>Multiples de 5 : 5, 10, 15, 20, 25, 30, 35</p> <p>Multiples de 3 : 3, 6, 9, 12, 15, 18, 21, 24, 27, 30</p> <p>Multiples de 2 : 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30</p> $E = \frac{1 \times 15}{2 \times 15} + \frac{1 \times 10}{3 \times 10} + \frac{1 \times 6}{5 \times 6}$ $E = \frac{15}{30} + \frac{10}{30} + \frac{6}{30}$ $E = \frac{15 + 10 + 6}{30}$ $E = \frac{31}{30}$	$F = \frac{-1}{3} - \frac{4}{5} + \frac{7}{-2}$ $F = -\frac{1}{3} - \frac{4}{5} - \frac{7}{2}$ <p>Les multiples sont à gauche</p> $F = -\frac{1 \times 10}{3 \times 10} - \frac{4 \times 6}{5 \times 6} - \frac{7 \times 15}{2 \times 15}$ $F = -\frac{10}{30} - \frac{24}{30} - \frac{105}{30}$ $F = \frac{-10 - 24 - 105}{30}$ $F = \frac{-34 - 105}{30}$ $F = \frac{-139}{30}$	$G = \frac{2}{-3} - \frac{1}{-4} - \frac{-3}{-2}$ $G = -\frac{2}{3} + \frac{1}{4} - \frac{3}{2}$ <p>Multiples de 4 : 4, 8, 12, 16</p> <p>Multiples de 3 : 3, 6, 9, 12, 15, 18</p> <p>Multiples de 2 : 2, 4, 6, 8, 10, 12</p> $G = -\frac{2 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} - \frac{3 \times 6}{2 \times 6}$ $G = -\frac{8}{12} + \frac{3}{12} - \frac{18}{12}$ $G = \frac{-8 + 3 - 18}{12}$ $G = \frac{-5 - 18}{12}$ $G = \frac{-23}{12}$	$H = -\frac{1}{2} - \frac{2}{-3} + \frac{-3}{-4} - \frac{-4}{5}$ $H = -\frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \frac{4}{5}$ <p>Les multiples communs de 5 et de 4 sont : 20, 40, 60, 80, ...</p> <p>Le plus petit multiple de 2 et de 3 est 60.</p> $H = -\frac{1 \times 30}{2 \times 30} + \frac{2 \times 20}{3 \times 20} + \frac{3 \times 15}{4 \times 15} + \frac{4 \times 12}{5 \times 12}$ $H = -\frac{30}{60} + \frac{40}{60} + \frac{45}{60} + \frac{48}{60}$ $H = \frac{-30 + 40 + 45 + 48}{60}$ $H = \frac{10 + 45 + 48}{60}$ $H = \frac{103}{60}$
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EXERCICE 2

$A = \frac{4}{7} - \left( \frac{6}{7} - \frac{5}{7} \right) + \frac{1}{7}$ $A = \frac{4}{7} - \frac{1}{7} + \frac{1}{7}$ $A = \frac{4-1+1}{7}$ $A = \frac{1}{7}$	$B = \frac{19}{4} - \left[ \frac{1}{2} - \left( \frac{3}{8} - \frac{1}{4} \right) \right]$ $B = \frac{19}{4} - \left[ \frac{1}{2} - \left( \frac{3}{8} - \frac{1 \times 2}{4 \times 2} \right) \right]$ $B = \frac{19}{4} - \left[ \frac{1}{2} - \left( \frac{3}{8} - \frac{2}{8} \right) \right]$ $B = \frac{19}{4} - \left[ \frac{1}{2} - \left( \frac{3-2}{8} \right) \right]$ $B = \frac{19}{4} - \left[ \frac{1}{2} - \frac{1}{8} \right]$ $B = \frac{19}{4} - \left[ \frac{1 \times 4}{2 \times 4} - \frac{1}{8} \right]$ $B = \frac{19}{4} - \left[ \frac{4}{8} - \frac{1}{8} \right]$ $B = \frac{19}{4} - \frac{3}{8}$ $B = \frac{19 \times 2}{4 \times 2} - \frac{3}{8}$ $B = \frac{38}{8} - \frac{3}{8}$ $B = \frac{35}{8}$	$C = \left( \frac{7}{12} - \frac{1}{6} \right) - \left( \frac{3}{4} - \frac{1}{3} \right)$ $C = \left( \frac{7}{12} - \frac{1 \times 2}{6 \times 2} \right) - \left( \frac{3 \times 3}{4 \times 3} - \frac{1 \times 4}{3 \times 4} \right)$ $C = \left( \frac{7}{12} - \frac{2}{12} \right) - \left( \frac{9}{12} - \frac{4}{12} \right)$ $C = \frac{5}{12} - \frac{5}{12}$ $C = 0$	$D = \frac{3}{10} - \left( \frac{97}{100} - 0,8 \right)$ $D = \frac{3}{10} - \left( \frac{97}{100} - \frac{0,8 \times 100}{1 \times 100} \right)$ $D = \frac{3}{10} - \left( \frac{97}{100} - \frac{80}{100} \right)$ $D = \frac{3}{10} - \frac{17}{100}$ $D = \frac{3 \times 10}{10 \times 10} - \frac{17}{100}$ $D = \frac{30}{100} - \frac{17}{100}$ $D = \frac{13}{100}$
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$E = -\frac{14}{30} - \left( \frac{-1}{6} - \frac{1}{-5} \right)$ $E = -\frac{14}{30} - \left( -\frac{1}{6} + \frac{1}{5} \right)$ $E = -\frac{14}{30} - \left( -\frac{1 \times 5}{6 \times 5} + \frac{1 \times 6}{5 \times 6} \right)$ $E = -\frac{14}{30} - \left( -\frac{5}{30} + \frac{6}{30} \right)$ $E = -\frac{14}{30} - \left( \frac{-5+6}{30} \right)$ $E = -\frac{14}{30} - \frac{1}{30}$ $E = \frac{-14-1}{30}$ $E = -\frac{15}{30}$	$F = \frac{24}{15} - \left[ -\frac{2}{3} - \left( \frac{11}{-5} - 2 \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} - \left( -\frac{11}{5} - 2 \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} - \left( -\frac{11}{5} - \frac{2 \times 5}{1 \times 5} \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} - \left( -\frac{11}{5} - \frac{10}{5} \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} - \left( \frac{-11-10}{5} \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} - \left( \frac{-21}{5} \right) \right]$ $F = \frac{24}{15} - \left[ \frac{2}{3} + \frac{21}{5} \right]$ $F = \frac{24}{15} - \left[ \frac{2 \times 5}{3 \times 5} + \frac{21 \times 3}{5 \times 3} \right]$ $F = \frac{24}{15} - \left[ \frac{10}{15} + \frac{63}{15} \right]$ $F = \frac{24}{15} - \frac{73}{15} \rightarrow F = -\frac{49}{15}$	$G = \left( \frac{-75}{10} - 3 \right) - \left( 5 - \frac{43}{-10} \right)$ $G = \left( +\frac{75}{10} - 3 \right) - \left( 5 + \frac{43}{10} \right)$ $G = \left( \frac{75}{10} - \frac{3 \times 10}{1 \times 10} \right) - \left( \frac{5 \times 10}{1 \times 10} + \frac{43}{10} \right)$ $G = \left( \frac{75}{10} - \frac{30}{10} \right) - \left( \frac{50}{10} + \frac{43}{10} \right)$ $G = \frac{45}{10} - \frac{93}{10}$ $G = \frac{45-93}{10}$ $G = -\frac{48}{10}$	$H = -\left( \frac{-25}{42} - \frac{2}{-7} \right) - \frac{5}{3}$ $H = -\left( -\frac{25}{42} + \frac{2}{7} \right) - \frac{5}{3}$ $H = -\left( -\frac{25}{42} + \frac{2 \times 6}{7 \times 6} \right) - \frac{5}{3}$ $H = -\left( -\frac{25}{42} + \frac{12}{42} \right) - \frac{5}{3}$ $H = -\left( \frac{-25+12}{42} \right) - \frac{5}{3}$ $H = -\left( \frac{-13}{42} \right) - \frac{5}{3}$ $H = \frac{13}{42} - \frac{5}{3}$ $H = \frac{13}{42} - \frac{5 \times 14}{3 \times 14}$ $H = \frac{13}{42} - \frac{70}{42}$ $H = \frac{13-70}{42}$ $H = -\frac{57}{42}$
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