

LA PROVIDENCE – MONTPELLIER

CORRIGE – M. QUET

EXERCICE 1

$A = \frac{1}{2} + \frac{2}{3}$ $A = \frac{1 \times 3}{2 \times 3} + \frac{2 \times 2}{3 \times 2}$ $A = \frac{3}{6} + \frac{4}{6}$ $A = \frac{7}{6}$	$B = \frac{3}{5} - \frac{2}{7}$ $B = \frac{3 \times 7}{5 \times 7} - \frac{2 \times 5}{7 \times 5}$ $B = \frac{21}{35} - \frac{10}{35}$ $B = \frac{11}{35}$	$C = -\frac{3}{11} + \frac{1}{2}$ $C = -\frac{3 \times 2}{11 \times 2} + \frac{1 \times 11}{2 \times 11}$ $C = -\frac{6}{22} + \frac{11}{22}$ $C = \frac{-6+11}{22}$ $C = \frac{5}{22}$	$D = -\frac{5}{7} - \frac{2}{3}$ $D = -\frac{5 \times 3}{7 \times 3} - \frac{2 \times 7}{3 \times 7}$ $D = -\frac{15}{21} - \frac{14}{21}$ $D = \frac{-15-14}{21}$ $D = -\frac{29}{21}$	$E = \frac{-9}{2} + \frac{-2}{11}$ $E = \frac{-9 \times 11}{2 \times 11} + \frac{-2 \times 2}{11 \times 2}$ $E = \frac{-99}{22} + \frac{-4}{22}$ $E = \frac{-99+(-4)}{22}$ $E = \frac{-103}{22}$
$F = -\frac{-3}{4} + \frac{-1}{5}$ $F = +\frac{3}{4} - \frac{1}{5}$ $F = \frac{3 \times 5}{4 \times 5} - \frac{1 \times 4}{5 \times 4}$ $F = \frac{15}{20} - \frac{4}{20}$ $F = \frac{11}{20}$	$G = -\frac{6}{7} + 3$ $G = -\frac{6}{7} + \frac{3}{1}$ $G = -\frac{6}{7} + \frac{3 \times 7}{1 \times 7}$ $G = -\frac{6}{7} + \frac{21}{7}$ $G = \frac{-6+21}{7}$ $G = \frac{15}{7}$	$H = 5 - \frac{14}{24}$ $H = \frac{5}{1} - \frac{14}{24}$ $H = \frac{5 \times 24}{1 \times 24} - \frac{14}{24}$ $H = \frac{120}{24} - \frac{14}{24}$ $H = \frac{106}{24}$ $H = \frac{\boxed{2} \times 53}{\boxed{2} \times 12} = \frac{53}{12}$	$I = \frac{-7}{6} + \frac{-5}{4}$ <p>Multiples de 6 : 6, 12, 18 Multiples de 4 : 4, 8, 12</p> $I = \frac{-7 \times 2}{6 \times 2} + \frac{-5 \times 3}{4 \times 3}$ $I = \frac{-14}{12} + \frac{-15}{12}$ $I = \frac{-14+(-15)}{12}$ $I = \frac{-29}{12}$	$J = \frac{19}{20} - \frac{-4}{30}$ $J = \frac{19}{20} + \frac{4}{30}$ <p>Multiples de 20 : 20, 40, 60 Multiples de 30 : 30, 60, 90</p> $J = \frac{19 \times 3}{20 \times 3} + \frac{4 \times 2}{30 \times 2}$ $J = \frac{57}{60} + \frac{8}{60}$ $J = \frac{65}{60}$ $J = \frac{\boxed{5} \times 13}{\boxed{5} \times 10} = \frac{13}{10}$

EXERCICE 2

Il faut gérer en priorité les signes des écritures et simplifier si possible les fractions.

$A = \frac{1}{-2} + \frac{1}{5}$ $A = \frac{-1}{2} + \frac{1}{5}$ $A = \frac{-1 \times 5}{2 \times 5} + \frac{1 \times 2}{5 \times 2}$ $A = \frac{-5}{10} + \frac{2}{10}$ $A = \frac{-3}{10}$	$B = \frac{-1}{7} - \frac{3}{-5}$ $B = -\frac{1}{7} + \frac{3}{5}$ $B = -\frac{1 \times 5}{7 \times 5} + \frac{3 \times 7}{5 \times 7}$ $B = -\frac{5}{35} + \frac{21}{35}$ $B = \frac{-5+21}{35}$ $B = \frac{16}{35}$	$C = \frac{1}{-2} - \frac{-5}{3}$ $C = -\frac{1}{2} + \frac{5}{3}$ $C = -\frac{1 \times 3}{2 \times 3} + \frac{5 \times 2}{3 \times 2}$ $C = -\frac{3}{6} + \frac{10}{6}$ $C = \frac{-3+10}{6}$ $C = \frac{7}{6}$	$D = -\frac{-5}{-10} + \frac{3}{-6}$ $D = -\frac{\boxed{5} \times 1}{\boxed{5} \times 2} - \frac{\boxed{3} \times 1}{\boxed{3} \times 2}$ $D = -\frac{1}{2} - \frac{1}{2}$ $D = \frac{-1-1}{2}$ $D = \frac{-2}{2}$ $D = -1$	$E = \frac{1}{-3} + \frac{-7}{10}$ $E = -\frac{1}{3} - \frac{7}{10}$ $E = -\frac{1 \times 10}{3 \times 10} - \frac{7 \times 3}{10 \times 3}$ $E = -\frac{10}{30} - \frac{21}{30}$ $E = \frac{-10-21}{30}$ $E = \frac{-31}{30}$
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$F = \frac{9}{8} + \frac{5}{-12}$ $F = \frac{9}{8} - \frac{5}{12}$ <p>Multiples de 8 : 8, 16, 24</p> <p>Multiples de 12 : 12, 24</p> $F = \frac{9 \times 3}{8 \times 3} - \frac{5 \times 2}{12 \times 2}$ $F = \frac{27}{24} - \frac{10}{24}$ $F = \frac{17}{24}$	$G = \frac{7}{-9} + \frac{-2}{15}$ $G = -\frac{7}{9} - \frac{2}{15}$ <p>Multiples de 9 : 9, 18, 27, 36, 45, 54</p> <p>Multiples de 15 : 15, 30, 45</p> $G = -\frac{7 \times 5}{9 \times 5} - \frac{2 \times 3}{15 \times 3}$ $G = -\frac{35}{45} - \frac{6}{45}$ $G = \frac{-35-6}{45}$ $G = \frac{-41}{45}$	$H = \frac{14}{-10} - \frac{-10}{-14}$ $H = -\frac{\boxed{2} \times 7}{\boxed{2} \times 5} - \frac{\boxed{2} \times 5}{\boxed{2} \times 7}$ $H = -\frac{7}{5} - \frac{5}{7}$ $H = -\frac{7 \times 7}{5 \times 7} - \frac{5 \times 5}{7 \times 5}$ $H = -\frac{49}{35} - \frac{25}{35}$ $H = \frac{-49-25}{35}$ $H = \frac{-74}{35}$	$I = -\frac{-6}{-8} - \frac{-8}{-6}$ $I = -\frac{\boxed{2} \times 3}{\boxed{2} \times 4} - \frac{\boxed{2} \times 4}{\boxed{2} \times 3}$ $I = -\frac{3}{4} - \frac{4}{3}$ $I = -\frac{3 \times 3}{4 \times 3} - \frac{4 \times 4}{3 \times 4}$ $I = -\frac{9}{12} - \frac{16}{12}$ $I = \frac{-9-16}{12}$ $I = \frac{-25}{12}$
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$J = \frac{-21}{-16} - \frac{25}{-24}$ $J = \frac{21}{16} + \frac{25}{24}$ <p>Multiples de 16 : 16, 32, 48, 64</p> <p>Multiples de 24 : 12, 24, 36, 48</p> $J = \frac{21 \times 3}{16 \times 3} + \frac{25 \times 2}{24 \times 2}$ $J = \frac{63}{48} + \frac{50}{48}$ $J = \frac{113}{48}$

EXERCICE 1

Calculer en donnant le résultat en *écriture fractionnaire* :

$A = \frac{1}{2} + \frac{2}{3}$ $A = \frac{1 \times 3}{2 \times 3} + \frac{2 \times 2}{3 \times 2}$ $A = \frac{3}{6} + \frac{4}{6}$ $A = \frac{7}{6}$	$B = \frac{3}{5} - \frac{2}{7}$ $B = \frac{3 \times \dots}{5 \times \dots} - \frac{2 \times \dots}{7 \times \dots}$	$C = -\frac{3}{11} + \frac{1}{2}$	$D = -\frac{5}{7} - \frac{2}{3}$	$E = \frac{-9}{2} + \frac{-2}{11}$
$F = -\frac{-3}{4} + \frac{-1}{5}$	$G = -\frac{6}{7} + 3$	$H = 5 - \frac{14}{24}$	$I = \frac{-7}{6} + \frac{-5}{4}$	$J = \frac{19}{20} - \frac{-4}{30}$

EXERCICE 2

Calculer en donnant le résultat en *écriture fractionnaire* :

$A = \frac{1}{-2} + \frac{1}{5}$ $A = \frac{-1}{2} + \frac{1}{5}$ $A = \frac{-1 \times 5}{2 \times 5} + \frac{1 \times 2}{5 \times 2}$ $A = \frac{-5}{10} + \frac{2}{10}$ $A = \frac{-3}{10}$	$B = \frac{-1}{7} - \frac{3}{-5}$	$C = \frac{1}{-2} - \frac{-5}{3}$	$D = -\frac{-5}{-10} + \frac{3}{-6}$	$E = \frac{1}{-3} + \frac{-7}{10}$
$F = \frac{9}{8} + \frac{5}{-12}$	$G = \frac{7}{-9} + \frac{-2}{15}$	$H = \frac{14}{-10} - \frac{-10}{-14}$	$I = -\frac{-6}{-8} - \frac{-8}{-6}$	$J = \frac{-21}{-16} - \frac{25}{-24}$