Correction du Devoir de rentrée

Corrections Calculs n°1

Exercice 1 :

a) $168 = 2^3 \times 3 \times 7$ et $360 = 2^3 \times 3^2 \times 5$ $PGCD(168\,;360) = 24$
b) $252 = 2^2 \times 3^2 \times 7$ et $684 = 2^2 \times 3^2 \times 19$ b $PGCD(252\,;684) = 36$
c) $336 = 2^4 \times 3 \times 7$ et $462 = 2 \times 3 \times 7 \times 11$ $PGCD(336\,;462) = 42$
d) $1840 = 2^4 \times 5 \times 23$ et $1260 = 2^2 \times 3^2 \times 5 \times 7$ $PGCD(1840\,;1260) = 20$

Exercice 2 :

a) $360 = 2^3 \times 3^2 \times 5$ et $504 = 2^3 \times 3^2 \times 7$ $PPCM(360\,;504) = 2520$
b) $252 = 2^2 \times 3^2 \times 7$ et $672 = 2^5 \times 3 \times 7$ $PPCM(252\,;672) = 2016$
c) $972 = 2^2 \times 3^5$ et $1134 = 2 \times 3^4 \times 7$ $PPCM(972\,;1134) = 6804$
d) $720 = 2^4 \times 3^2 \times 5$ et $900 = 2^2 \times 3^2 \times 5^2$ $PPCM(720\,;900) = 3600$

Exercice 3 :

$A = \frac{31}{450}$ $B = \frac{30}{41}$ $C = \frac{18}{35}$ $D = \frac{32}{35}$ $E = -\frac{6}{41}$ $F = \frac{21}{16}$ $G = \frac{7}{10}$

$H = -\frac{15}{4}$

Corrections Calculs n°2

Exercice 1 :

$A = 2^4$ $B = 3^{-4}$ $C = 7^{-1}$ $D = 5^{14}$

Exercice 2 :

$A = 3$ $B = 4$

Exercice 3 :

$A = \frac{3}{2^8} \times 10^{-1}$ $B = \frac{49}{40} \times 10^{-1}$ A et B sont des nombres décimaux

Exercice 4 :

$A = 162$ $B = 2003000$ $C = 1{,}00001$ $D = 79$

Exercice 5 :

$A = \frac{9x+16}{4}$ $B = \frac{10x+9}{12}$ $C = \frac{-13x+46}{15}$ $D = \frac{-7x-18}{12}$ $E = \frac{-12y+19}{15}$

Corrections Calculs n°3

Exercice 1 :

$\sqrt{20} = 2\sqrt{5}$	$\sqrt{72} = 6\sqrt{2}$	$\sqrt{50} = 5\sqrt{2}$	$\sqrt{343} = 7\sqrt{7}$	$\sqrt{112} = 4\sqrt{7}$
$\sqrt{24} = 2\sqrt{6}$	$\sqrt{96} = 4\sqrt{6}$	$\sqrt{125} = 5\sqrt{5}$	$\sqrt{32} = 4\sqrt{2}$	$\sqrt{175} = 5\sqrt{7}$
$\sqrt{75} = 5\sqrt{3}$	$\sqrt{98} = 7\sqrt{2}$	$\sqrt{363} = 11\sqrt{3}$	$\sqrt{108} = 6\sqrt{3}$	$\sqrt{275} = 5\sqrt{11}$
$\sqrt{12} = 2\sqrt{3}$	$\sqrt{80} = 4\sqrt{5}$	$\sqrt{45} = 3\sqrt{5}$	$\sqrt{150} = 5\sqrt{6}$	$\sqrt{320} = 8\sqrt{5}$

Correction du Devoir de rentrée

Exercice 2 :

$A = 9\sqrt{6}$ $B = 120\sqrt{5}$ $C = -25\sqrt{3}$

Exercice 3 :

$A = -80$ $B = 3$ $C = 4$

Exercice 4 :

$A = 116 + 16\sqrt{30}$ $B = 230 + 40\sqrt{30}$

Corrections Calculs algébriques n°1

Exercice 1 :

$A = x^2 - 2x - 15$ $B = 20x^2 - 19x + 3$ $C = -2x^2 + 3x - 1$

Exercice 2 :

$A = x^2 + 10x + 25$ $D = 9x^2 - 30x + 25$

$I = -16x^2 + 9$ $J = \frac{4}{9}x^2 - \frac{4}{49}$

Exercice 3 :

$A = (x+3)^2$ $B = (3x-2)^2$ $C = \left(\frac{1}{2}x - 1\right)^2$ $D = (x-4)(x+4)$

Exercice 4 :

$(E_1) : S_1 = \left\{-\frac{7}{3}\right\}$ $(E_2) : S_2 = \left\{-\frac{4}{7}\right\}$ $(E_3) : S_3 = \{-11\}$ $(E_4) : S_4 = \left\{\frac{7}{5} ; -\frac{7}{5}\right\}$

Corrections Fonctions :

Exercice 1 :

1) **Images** :

$f(2) = -6$	$f\left(-\frac{3}{2}\right) = \frac{9}{2}$	$f(-5) = 15$	$f\left(\frac{7}{5}\right) = -\frac{21}{5}$
$g(2) = -\frac{2}{3}$	$g\left(-\frac{3}{2}\right) = \frac{1}{2}$	$g(-5) = \frac{5}{3}$	$g\left(\frac{7}{5}\right) = -\frac{7}{15}$
$l(2) = \frac{15}{4}$	$l\left(-\frac{3}{2}\right) = -\frac{13}{4}$	$l(-5) = \frac{-41}{4}$	$l\left(\frac{7}{5}\right) = \frac{51}{20}$
$m(2) = \frac{8}{3}$	$m\left(-\frac{3}{2}\right) = 5$	$m(-5) = \frac{22}{3}$	$m\left(\frac{7}{5}\right) = \frac{46}{15}$

2) **Antécédents** :

Pour f :	$x = -1$	$x = \frac{2}{3}$	$x = -\frac{1}{4}$	$x = \frac{1}{6}$
Pour g :	$x = -9$	$x = 6$	$x = -\frac{9}{4}$	$x = \frac{3}{2}$
Pour l :	$x = \frac{13}{8}$	$x = -\frac{7}{8}$	$x = \frac{1}{2}$	$x = -\frac{1}{8}$
Pour m :	$x = \frac{3}{2}$	$x = 9$	$x = \frac{39}{8}$	$x = \frac{27}{4}$