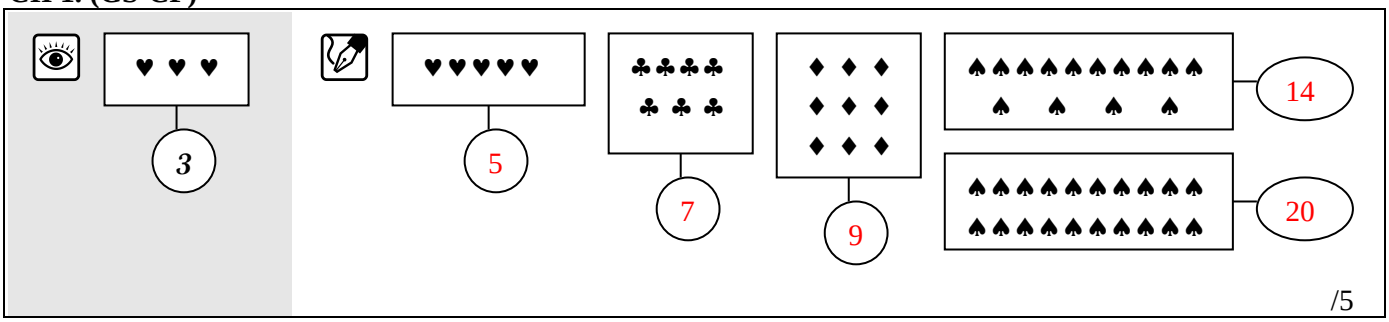
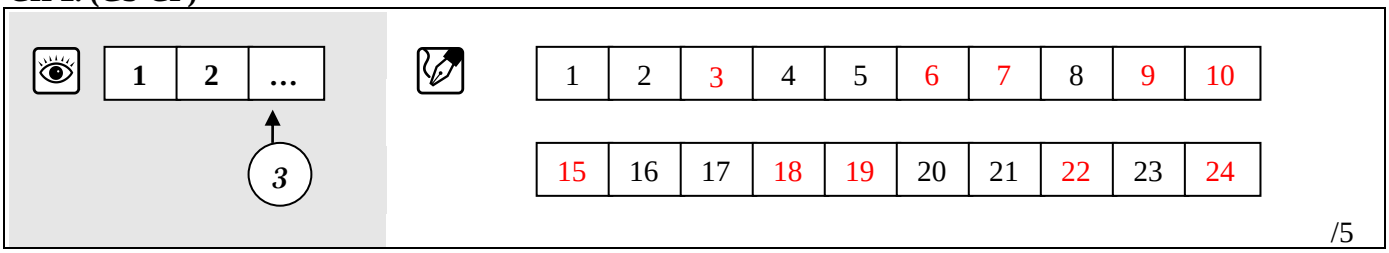
Cycle 2 (CP/CE1/CE2) **Corrigé**

CII 1. (GS-CP)



/5

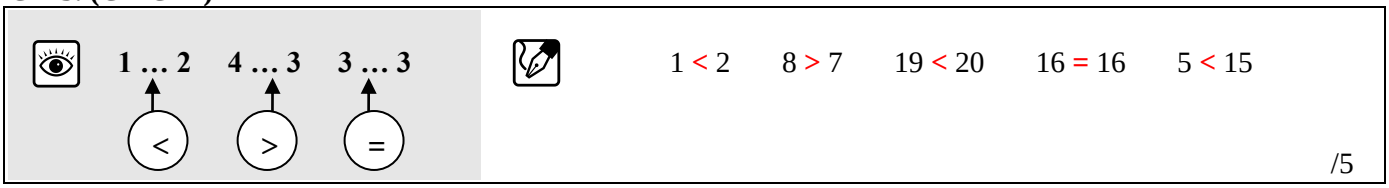
CII 2. (GS-CP)



1	2	3	4	5	6	7	8	9	10
15	16	17	18	19	20	21	22	23	24

/5

CII 3. (CP-CE1)



1 < 2 8 > 7 19 < 20 16 = 16 5 < 15

/5

CII 4. (CP-CE1)

3 + 2 = 5 10 + 20 = 30

$\begin{array}{r} 5 \\ +\ 3 \\ \hline 8 \end{array}$ $\begin{array}{r} 7 \\ +\ 9 \\ \hline 16 \end{array}$ $\begin{array}{r} 28 \\ +\ 71 \\ \hline 99 \end{array}$

/5

CII 5. (CP-CE1)

5 – 2 = 3 70 – 30 = 40

$\begin{array}{r} 9 \\ -\ 7 \\ \hline 2 \end{array}$ $\begin{array}{r} 13 \\ -\ 3 \\ \hline 10 \end{array}$ $\begin{array}{r} 86 \\ -\ 54 \\ \hline 32 \end{array}$

/5

Cycle 2 (CP/CE1/CE2) **Corrigé**

CII 6. (CP-CE1)

2 x 2 = 4 3 x 2 = 6 2 x 7 = 14

8 = 2 x 4 12 = 2 x 6

/5

CII 7. (CE1-CE2)

5 < 7 4 > 2 3 = 3 2 ≠ 1

7 < 10 19 > 9 95 > 57

32 = 32 501 > 498

/5

CII 8. (CE1-CE2)

15	37	88	46	500
+ 4	+ 12	+ 2	+ 87	+ 79
19	49	90	133	579

/5

CII 9. (CE1-CE2)

16	35	27	398	127
– 6	– 7	– 19	– 58	– 69
10	28	8	340	58

/5

Cycle 2 (CP/CE1/CE2) — **Corrigé**

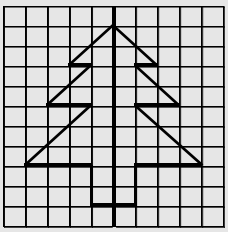
CIII 1. (CE2-CM1)

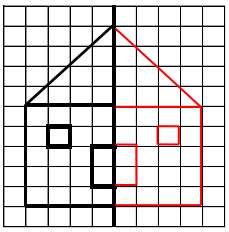
436 x 12 = 872 + 4360 = 5232

8 x 5 = 40	7 x 9 = 63	63 x 4 = 252	123 x 45 = 615 + 4920 = 5535	78 x 96 = 468 + 7020 = 7488

/5

CIII 2. (CE2-CM1)





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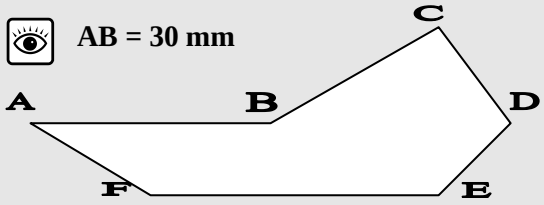
CIII 3. (CE2-CM1)

AB = 30 mm



BC = 24 mm CD = 15 mm

DE = 13 mm EF = 36 mm

FA = 18 mm

/5

CIII 4. (CM1-CM2)

1 > 0,1 20,01 < 20,10

1 > 0,9 7,9 < 8,1 0,1 < 1

0,2 > 0,09 9,5 = 9,50

/5

CIII 5. (CM1-CM2)

55000 + 500 + 50 + 5 = 55555

94376 + 5623 = 99999

75394 + 82063 = 157457

31604 + 87295 = 118899

82051 + 97369 = 179420

/5

Cycle 3 (CM1/CM1/6ème) — **Corrigé**

CIII 6. (CM1-CM2)

25,5
+ 76,32
= 101,82

17 + 0,77 = 17,77 — 50,05 + 5,5 = 55,55 — 375 + 21,6 = 396,6

48,7 + 89,6 = 138,3 — 264 + 73,6 + 18,95 = 365,55

/5

CIII 7. (CM1-CM2)

90 571 - 500 - 70 - 1 = 90000

87 965 – 15 623 = 72342

85 063 – 84 964 = 99

87695
- 31204
= 56491

92051
- 87369
= 4682

/5

CIII 8. (CM1-CM2)

37,8 – 5 = 32,8 — 49 – 6,5 = 42,5

38,76 – 32,14 = 6,62 — 349,6 – 27,85 = 321,75 — 872 – 86,14 = 785,86

/5

CIII 9. (CM1-CM2)

888 x 100 = 88 800

7 x 10 000 = 70 000

500 x 200 = 100 000

654
x 321
654
13080
196200
= 209934

8205
x 673
24615
574350
4923000
= 5521965

/5

CIII 10. (CM2-6ème)

5,62 x 1000 = 5620 — 378,2 x 0,01 = 3,782

2,5 x 480 = 1200 — 176 x 0,340 = 59,84 — 79,1 x 3,52 = 278,432

/5

CIII 11. (CM2-6ème)

1470 | **42**
- 126 | **35**
210
- 210
0

275 : 100 = 2,75 — 72 : 8 = 9

2742 : 3 = 914 — 185 : 37 = 5

75 : 30 = 2,5

/5

Cycle 3 (CM1/CM1/6ème) **Corrigé**

CIII 12. (CM2-6ème)

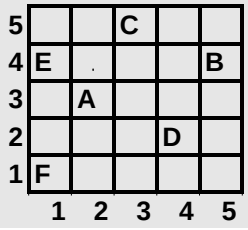
$\frac{10}{4} = 2,5$ $\frac{925}{370} = 2,5$

3230 : 68 = 47,5 323 : 6,8 = 47,5 3284 : 16,42 = 200

/5

CIII 13. (CM2-6ème)

A (2,3)



B (5 , 4) C (3 , 5)

D (4 , 2) E (1 , 4)

F (1 , 1)

/5

CIII 14. (CM2-6ème)

1 h = 60 mn 1 mn = 60 s

1 km = 1000 m 1 m = 100 cm 1 cm = 10 mm 50000 m = 50 km

1 t = 1000 kg 1 kg = 1000 g 1 g = 1000 mg 3000 g = 3 kg

/5

Cycle 4 (5ème/4ème/3ème) **Corrigé**

CIV 1. (6ème-5ème)

$\frac{25}{100} = 0{,}25$

$\frac{93}{100} = 0{,}93$ $\quad \frac{7}{10} = 0{,}7$ $\quad \frac{250}{100} = 2{,}5$ $\quad \frac{318}{100} = 3{,}18$ $\quad \frac{12}{10} = 1{,}2$

/5

CIV 2. (6ème-5ème)

$\frac{18}{30} = \frac{\cancel{2} \times \cancel{3} \times 3}{\cancel{2} \times \cancel{3} \times 5} = \frac{3}{5}$

$\frac{2}{6} = \frac{2}{2x3} = \frac{1}{3}$ $\quad \frac{50}{40} = \frac{5x10}{4x10} = \frac{5}{4}$

$\frac{20}{28} = \frac{4x5}{4x7} = \frac{5}{7}$ $\quad \frac{42}{36} = \frac{6x7}{6x6} = \frac{7}{6}$ $\quad \frac{810}{720} = \frac{9x90}{8x90} = \frac{9}{8}$

/5

CIV 3. (6ème-5ème)

$\frac{3}{2} \times \frac{5}{2} = \frac{3x5}{2x2} = \frac{15}{4}$

/5

$\frac{1}{5} \times \frac{5}{1} = \frac{5}{5} = 1$ $\quad \frac{3}{2} \times \frac{2}{3} = \frac{6}{6} = 1$

$\frac{7}{3} \times \frac{2}{5} = \frac{14}{15}$ $\quad \frac{15}{30} \times \frac{8}{2} = \frac{120}{60} = 2$ $\quad \frac{72}{35} \times \frac{7}{8} = \frac{8x9x7}{5x7x8} = \frac{9}{5}$

CIV 4. (5ème-4ème)

$\frac{3}{2} + \frac{5}{2} = \frac{8}{2} = 4$

$\frac{7}{5} - \frac{2}{5} = \frac{5}{5} = 1$

$\frac{3}{4} + \frac{9}{4} = \frac{12}{4} = 3$ $\quad \frac{2}{5} + \frac{8}{5} = \frac{10}{5} = 2$

$\frac{7}{3} - \frac{1}{3} = \frac{6}{3} = 2$ $\quad \frac{17}{7} - \frac{3}{7} = \frac{14}{7} = 2$ $\quad \frac{3}{2} - \frac{1}{2} = \frac{2}{2} = 1$

/5

CIV 5. (5ème-4ème)

$\frac{7{,}2}{9} = 0{,}8$

$\frac{3{,}5}{5} = 0{,}7$ $\quad \frac{72}{1{,}2} = 60$ $\quad \frac{53{,}2}{1{,}9} = 28$ $\quad \frac{10{,}35}{2{,}3} = 4{,}5$ $\quad \frac{0{,}1}{0{,}025} = 4$

/5

Cycle 4 (5ème/4ème/3ème) **Corrigé**

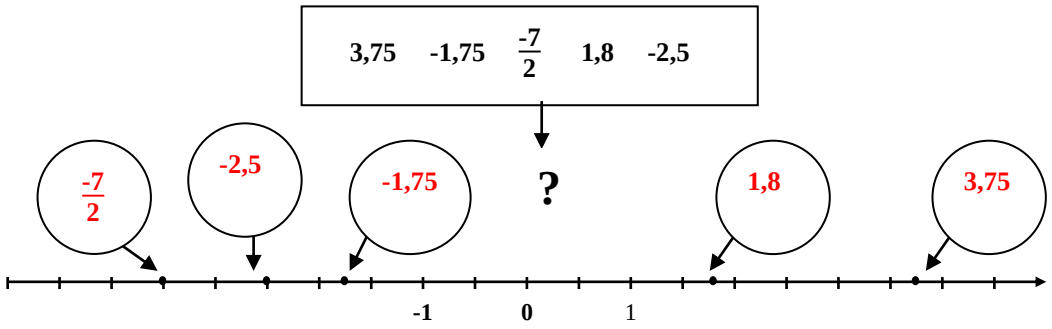
CIV 6. (5ème-4ème)

$\frac{75}{100} = 75\ \%$

$\frac{37}{100} = 37\ \%$ $\frac{5}{10} = 50\ \%$ $\frac{1}{4} = 25\ \%$ $\frac{8,74}{38} = 23\ \%$ $\frac{0,325}{10} = 3,25\ \%$

/5

CIV 7. (5ème-4ème)



/5

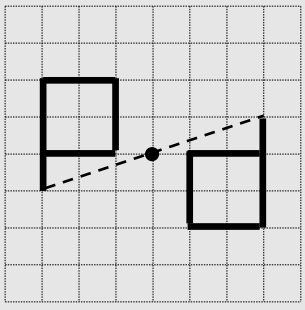
CIV 8. (5ème-4ème)

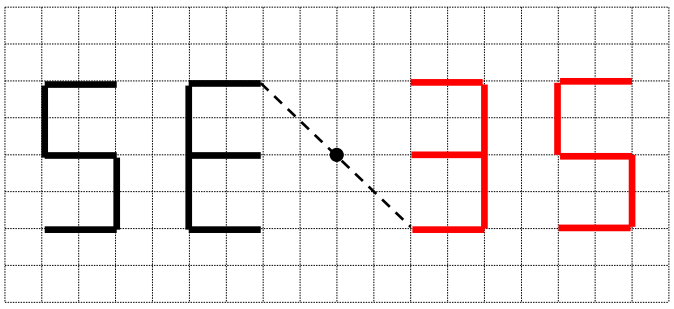
12,8 + 40,3 = 53,1 7,91 + 25,6 = 33,51 0,25 + 15,5 = 15,75

3,8 x 4 = 15,2 23 x 20,5 = 471,5

/5

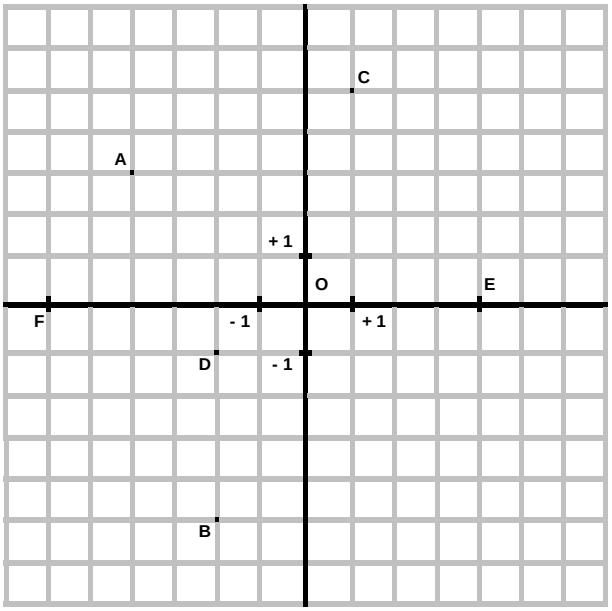
CIV 9. (5ème-4ème)





Cycle 4 (5ème/4ème/3ème) **Corrigé**

CIV 10. (5ème-4ème)



A (- 4 , 3)

B (-2 , -5)

C (1 , 5)

D (-2 , -1)

E (4 , 0)

F (-6 , 0)

/5

CIV 11. (4ème-3ème)

2	**x**
3	$\frac{3}{2}$ **x**

3	1	9	90	93	x
1	$\frac{1}{3}$	3	30	31	$\frac{1}{3}$x

/5

CIV 12. (4ème-3ème)

a = 2,5 **b = 4** **c = 0,25**

a + bc = 2,5 + (4 x 0,25) = 2,5 + 1 = 3,5

a – bc = 1,5 a(b+c) = 10,625

$a + \frac{b}{c}$ = 18,5 $\frac{a-b}{c}$ = -6 $\frac{bc-a}{ab}$ = -0,15

/5

CIV 13. (4ème-3ème)

-1,8 x (-0,2) = 0,36 -0,5 x 1,02 = -0,51 -10,2 x 0,05 = -0,51

1,8 x (-0,2) x 0,05 x (-10,2) = 0,1836 0,05 x (-10,2) x 10,2 x 0,05 = -0,2601

/5

Cycle 4 (5ème/4ème/3ème) **Corrigé**

CIV 14. (4ème-3ème)

$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$

$\frac{a}{b} + \frac{c}{d} = \frac{ad+cb}{bd}$

$\frac{5,2}{4} + \frac{0,8}{4} = \frac{3}{2}$ $\quad \frac{-3,3}{0,8} + \frac{2,1}{0,8} = \frac{-3}{2}$

$\frac{-10}{3} + \frac{7}{2} = \frac{1}{6}$ $\quad \frac{3}{2} - \frac{12,5}{5} = -1$ $\quad \frac{-2,2}{0,9} - \frac{14}{9} = -4$

/5

CIV 15. (4ème-3ème)

$250 \times 10^{-1} = 0,25 \times 10^{2} = 25$

/5

$35 \times 10^{-1} = 3,5$ $\quad 280 \times 10^{-2} = 2,8$

$16 \times 10^{-3} = 0,016$ $\quad 0,52 \times 10^{-2} = 0,0052$ $\quad 0,01 \times 10^{3} = 10$

CIV 16. (4ème-3ème)

$\frac{1}{10} = 10^{-1}$; $\frac{a^2}{a^5} = \frac{1}{a^3}$

$a^2 \times a^3 = a^5$; $(ab)^2 = a^2b^2$

$10^{-1} \times 10^{2} = 10$ $\quad \frac{1}{10^3} = 10^{-3} = 0,001$

$(-1)^3 = -1$ $\quad 3 \times 3^2 = 3^3 = 27$ $\quad (-2)^2 \times \frac{2^2}{2^4} = 1$

/5

CIV 17. (4ème-3ème)

$5x + y - 2x - 3y = 3x - 2y$

$(a+b)(c+d) = ac + ad + bc + bd$

$X^3 + 2X = X(X^2 + 2)$

$-6 + 3a - b + 8 - 4a + 2b = -a + b + 2$

$(3x + 1)(x + 2) = 3x^2 + 7x + 2$ $\quad 2(A + 5)(A - 1) = 2A^2 + 8A - 10$

$2A^2 - 4A = 2A(A-2)$ $\quad 6x + 3x^2 = 3x(x+2)$

/5

CIV 18. (4ème-3ème)

$2x - 6 = 0 \Rightarrow 2x = 6 \quad x = 3$

$-3a + 1 < 4 \Rightarrow -3a < 3 \Rightarrow a > 1$

$-2a + 3 = 1 \Rightarrow a = 1$

$3x - 5 = 2x + 10 \Rightarrow x = 15$ $\quad - 5 = 3A + 10 \Rightarrow A = -5$

$5x > 10 \Rightarrow x > 2$ $\quad 12a - 7 < 13a - 8 \Rightarrow a > 1$

/5

Cycle 4 (5ème/4ème/3ème) **Corrigé**

CIV 19. (4ème-3ème)

$(a+b)(a-b) = a^2 - b^2$

$(a+b)^2 = a^2 + 2ab + b^2$

$(a-b)^2 = a^2 - 2ab + b^2$

$(x + 2)(x - 2) = x^2 - 4$

$(3x + 1)^2 = 9x^2 + 6x + 1$

$(2X + 3Y)^2 = 4X^2 + 12XY + 9Y^2$

$(x - 5)^2 = x^2 - 10x + 25$

$(3X - 2Y)^2 = 9X^2 - 12XY + 4Y^2$

/5

CIV 20. (4ème-3ème)

$(\sqrt{a})^2 = a$

$\sqrt{axb} = \sqrt{a} \times \sqrt{b}$

$x^2 = 9$ ⇨ $x = 3$; $x = -3$

$(\sqrt{5})^4 = 25$

$3\sqrt{49} = 21$

$\sqrt{2} \times \sqrt{8} = \sqrt{16} = 4$

$2\sqrt{2} \times \sqrt{50} = 2\sqrt{100} = 20$

$x^2 = 0,25$ ⇨ $x = -0,5$; $x = 0,5$

/5

CIV 21. (4ème-3ème)

$(x - 1)(2x + 4) = 0$

⇨ $x = 1$; $x = -2$

$\begin{cases} x + 2y = 0 \\ x + y = 1 \end{cases}$

⇨ $x = 2$; $y = -1$ }

$(x + 1)(x - 1) = 0$ ⇨ $x = 1$; $x = -1$

$(x - 5)(3x + 15) = 0$ ⇨ $x = 5$; $x = -5$

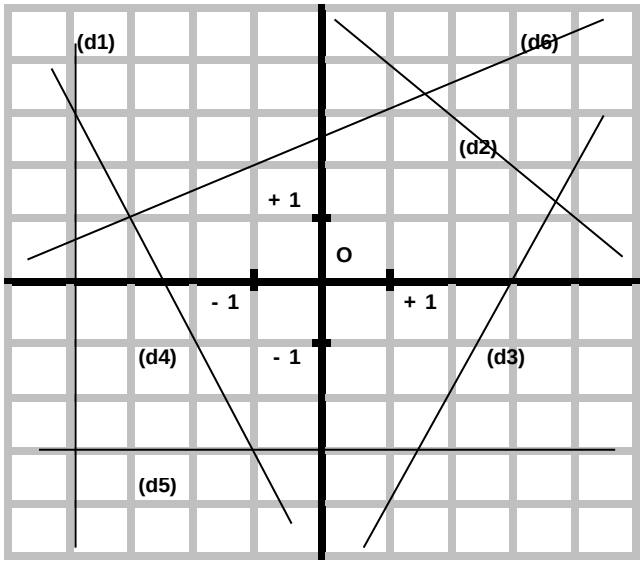
$(-2x + 9)(-5x + 3) = 0$ ⇨ $x = 0,6$ $x = 4,5$

$\begin{cases} x + 5y = 10 \\ x + 2y = 4 \end{cases}$ ⇨ $x = 0$; $y = 2$

$\begin{cases} -3x + 2y = 5 \\ x + 4y = 3 \end{cases}$ ⇨ $x = -1$ $y = -1$

/5

CIV 22. (4ème-3ème)



$2y = x + 5$ ⇨ **(d6)**

$x = -4$ ⇨ (d1)

$y = -3$ ⇨ (d5)

$y = -x + 5$ ⇨ (d2)

$y = 2x - 6$ ⇨ (d3)

$y = -2x - 5$ ⇨ (d4)

/5