

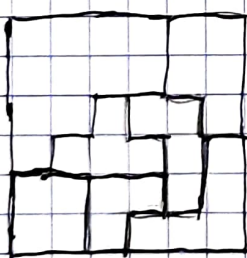
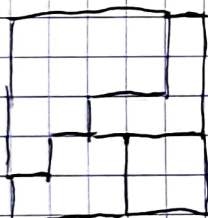
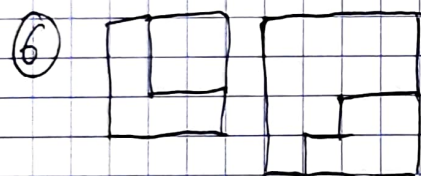
$$\begin{aligned} ① \quad & 3 = 2^2 - 1 \\ & + 5 = 8 = 3^2 - 1 \\ & + 7 = 15 = 4^2 - 1 \\ & + 9 \\ & + 11 \\ & + 13 = 48 = 7^2 - 1 \end{aligned} \rightarrow 6$$

$$② \quad 25 - 8 = 17 = 5 \times 3 + 2 \\ \rightarrow 3 + 4 = \underline{7}$$

$$③ \quad 4019$$

$$④ \quad \begin{array}{|c|c|c|c|} \hline 1 & 3 & 2 & 4 \\ \hline 4 & 2 & 3 & 1 \\ \hline 3 & 4 & 1 & 2 \\ \hline 2 & 1 & 4 & 3 \\ \hline \end{array}$$

$$⑤ \quad 391$$



$$3, 4, 5, 6$$

$$⑦ \quad 31 \text{ décembre } 2014$$

$$⑧ \quad V - v + h = 120 \quad \rightarrow 31 \text{ décembre } 2014$$

$$v - V + h = 90$$

$$2h = 210$$

$$\rightarrow h = 105 \text{ cm}$$

$$⑨ \quad M = 1 \quad B \geq 8$$

$$\bullet \text{ Si } B = 8, A = 0, U = 9$$

$$\rightarrow H = 0 \text{ impossible}$$

$$\bullet B = 9, A = 0, H = U + 1$$

$$\begin{array}{r} 10HDI \\ + 9ULIT \\ \hline 10HDI0 \end{array}$$

$$H + I \rightarrow \text{retenue donc } D < I$$

$$\text{donc } D + L + 1 = I$$

$$H + I = 10 + D$$

$$\rightarrow H + L + 1 = 10$$

$$H + L = 9 \quad I - D = L + 1$$

H	L	U		I	D	T
3	6	2	imp (I-D)	8	2	2 imp
4	5	3				
5	4	4	imp.	8	4	2 OK
6	3	5		8	5	2 imp
7	2	6				

$$\begin{array}{r} 10648 \\ + 95832 \\ \hline 106480 \end{array}$$

$$106480 \leftarrow 1 \text{ sol}^\circ$$

10

$$2025 = 3^4 \times 5^2$$

$$\{b, d\} = \{1, 3^4\} \text{ ou } \{3, 3^3\}$$

$\{e, f\}$: l'autre

$$d \neq 1$$

$$a = 5 \times 3^k$$

$$f = 3^l$$

$$f \neq 1$$

~~OK~~

Symétrie $\rightarrow$ $b=1$ $d=3^4$ $a=5 \times 3^4$

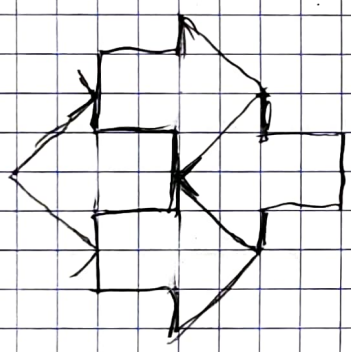
$$f=3 \quad e=3^3 \quad c=3 \times 5$$

5	405	1
15	5/3	81
27	3	25

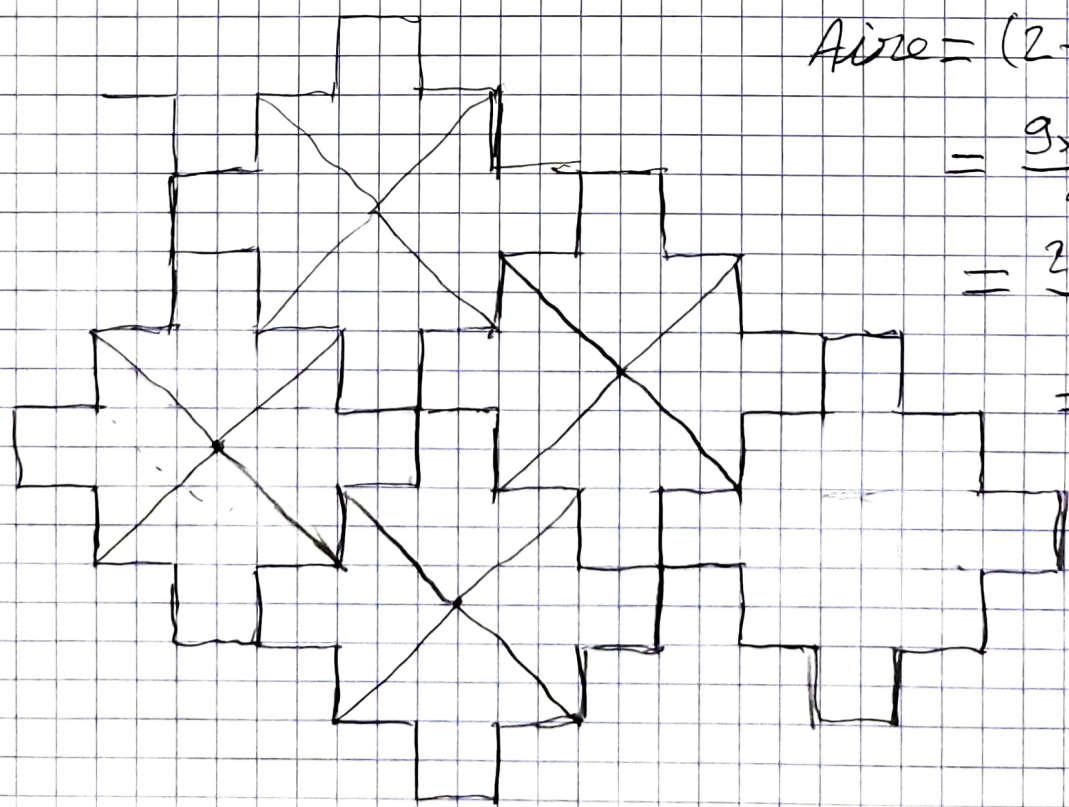
et

5	15	27
405	5/3	3
1	81	25

11



$$\text{Aire} = 25 \text{ cm}^2$$



$$\text{Aire} = \left(2 + \frac{1}{4}\right) \times 25$$

$$= \frac{3 \times 25}{4} = \frac{225}{4}$$

$$= \frac{224}{4} + 0,25$$

$$= 56,25 \text{ cm}^2$$

2 sol^{ns}

12) Dans le plan?



$$AB = 6 \times \sqrt{16 + 36}$$

$$= 12 \times \sqrt{13}$$

$$\approx 12 \times 3,606 =$$

$$\begin{array}{r} 36,06 \\ 7,212 \\ \hline 43,272 \end{array}$$

→ 43,3 cm

13) $25^2 \quad 26^2$

$$25^2 + 26 = 625 + 26 = \underline{\underline{651}}$$

14) $(a+1)(b+1)(c+1) = abc + (ab + ac + bc + a + b + c) + 1$

$$= \begin{array}{r} 8640 \\ 970 \\ 384 \\ 256 \\ \hline 10250 \end{array}$$

$$\leftarrow 1 \text{ sol}^o$$

15) $1/2$?

Probabilité d'égalité? puis $\frac{1-p}{2}$

$p =$ Proba que la moyenne soit un entier / 6
somme div. par 6 : $1/6$

$$p = 1/36$$

$$(35/36) / 2 =$$

$$\frac{35}{72}$$

$$(16) \quad DE = x$$

$$BE^2 = 125^2 + 144^2 - x^2$$

$$CD^2 = 144^2 + x^2$$

$$144^2 + CD^2 + 288 \cdot CD + 125^2 = 144^2 + BE^2 + 288 \cdot BE$$

$$\frac{x}{125} = \frac{144}{144 + CD} \rightarrow 144 + CD = \frac{144 \times 125}{x}$$

$$CD = \frac{144 \times 125}{x} - 144$$

$$144^2 + x^2 = CD^2 = \left(\frac{144 \times 125}{x} - 144 \right)^2$$

$$x^2 = \frac{(144 \times 125)^2}{x^2} - \frac{2 \times 144^2 \times 125}{x}$$

$$x^4 = 144^2 \times 125 (125 - 2x) \quad 1 \text{ sol}^o$$

$$= 12^4 \times 5^3 (125 - 2x) \rightarrow x = 60$$

$$CD^2 = 12^2 (144 + 5^2) = (12 \times 13)^2 = 156^2$$

$$CD = 156$$

$$AC = 144 + 156 = 300$$

$$S = \frac{125 \times 300}{2} = \frac{37500}{2} = \underline{\underline{18750 \text{ m}^2}}$$