

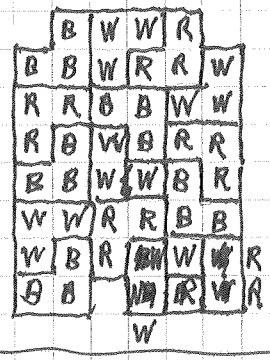
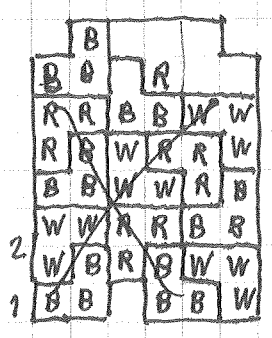
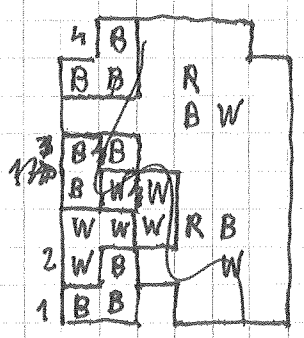
5

5	3	6	2	4	1
4	2	3	5	6	1
1	6	2	3	5	4

(20)	6	(18)	10	24	1
4	(12)	6	(15)	(30)	(4)

78

6



7

5

8

F R F F J R M R R J M J J F R P=13

$a_1 = F \quad a_2 = F \quad 999 = 13k + 11 \rightarrow a_{999} = a_{11} = J$

$b_1 = R \quad b_2 = M \quad b_{999} = b_{11} = F$

$c_1 = M \quad c_2 = R \quad c_{999} = c_{11} = F$

M M F M M F ...

$d_{999} = d_3 = F$

9

$n_1 = 1 \quad n_3 = 3 \times 2 = 6$

$n_2 = 1 \quad n_4 = 4$   
 $1+3=4$

$n_2 = 15$

(16)

$$15 = 4 + 1 + 10$$

$$2 + 9$$

$$3 + 8$$

$$4 + 7$$

$$1 \quad 6 \quad 10$$

$$2 \quad 6 \quad 9$$

$$3 \quad 6 \quad 8$$

$$6 \quad 6 \quad 7$$

$$15 = 6 + 1 + 8$$

$$2 + 7$$

$$3 + 6$$

$$1 \quad 4 \quad 8$$

$$2 \quad 4 \quad 7$$

$$3 \quad 4 \quad 6$$

(17)

$$0 \quad 1 \quad 2 \quad 3$$

$$1 \quad 2 \quad 3 \quad 0$$

$$2 \quad 3 \quad 0 \quad 1$$

$$3 \quad 0 \quad 1 \quad 2$$

0	2	3	1
1	3	2	0
2	0	1	3
3	1	0	2

0	3	1	2
1	2	0	3
2	1	3	0
3	0	2	1

$$2 \times 4! = 48$$

(12)

$$\frac{1}{2} \frac{1}{5} : 64g - 6 \text{ faces} \quad 1g/f$$

$$\rightarrow 25 \text{ g/f}$$

$$1: 1 + 4 \text{ faces}$$

$$2: 8 + 12 \text{ faces}$$

$$3: 16 + 20 \text{ faces}$$

$$4: 24 + 28 \text{ faces}$$

$$5: 32 + 36 \text{ faces}$$

$$\text{Vermi: } 25 \times 181 \text{ g} = 18100/4 = 4525 \text{ g}$$

$$\text{Cubes: } 1 + 9 + 25 + 49 + 81 = 165 \text{ cubes}$$

$$165 \times 125 \times 300 \text{ g} = 49500 \times 125 = 49500000 / 8$$

$$= 6187500 \text{ g}$$

$$\frac{6187500}{8} = 6187500 / 8 = 773437.5 \text{ g}$$

$$6187500 \text{ g} = 6.1875 \text{ kg}$$

(13)

Math. 3 hexag.  $\rightarrow 8$   
8 axes sommato  $\rightarrow 16?$

(14)

~~a x b~~  $c \times \frac{p}{q} = \frac{c}{p, q}$   $c=1$

$\frac{p}{q} \in p, q$   $\frac{q}{p} = p, q = p+q \cdot 10^{-n}$  ( $n = \#q$ )

~~$p^2 = 10^n$~~   ~~$p = 10^{n/2}$~~   $q = p^2 + pq \cdot 10^{-n}$

~~$p=10$~~ ,  ~~$q=10$~~

$10^m p^2 - 10^m q + pq = 0 \rightarrow q | 10^m$   
 $p | 10^m$   $10^n | pq$

~~$p=1$  ou  $q=1$~~   ~~$p=1$  ou  $q=1$~~

$n$   $q=1 \rightarrow n=1, 10p^2 - 10 + p = 0$  non

$p=1$

~~$10^m (1-q) + q = 0$~~   
 ~~$10^m = \frac{q}{q-1}$~~

$p = 2^a, q = 5^b$  ou  $p = 5^a, q = 2^b$   $a, b \geq n$

$10^m = \frac{2^a \cdot 5^b}{5^b - 2^a} = \frac{2^a \cdot 5^b}{5^b - 4^a}$

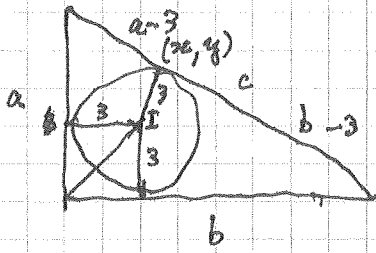
ou  ~~$\frac{5^a \cdot 2^b}{2^b - 25^a}$~~

(1, 1)

~~$p=2, q=5$~~

~~$\frac{2}{5} = 10/5 = \frac{1}{2,5}$~~

~~2/5~~



$$a^2 + b^2 = c^2 \quad c = a + b - 6$$

~~$$ax + by + a \quad ax - by = 0$$~~

~~$$y = -\frac{a}{b}(x - b)$$~~

~~$$ax + by - ab = 0$$~~

$$a^2 + b^2 = (a + b - 6)^2 = a^2 + b^2 + 36 + 2(ab - 6a - 6b)$$

~~$$18 + ab - 6a - 6b = 0$$~~

~~$$b = \frac{18 - 6a}{6 - a} = \frac{6a - 18}{a - 6} = \frac{6(a - 6) + 18}{a - 6}$$~~

$$a = 7 \rightarrow b = 6 + 18 = 24$$

$$a - 6 \mid 18$$

$$a = 8 \rightarrow b = 6 + 9 = 15$$

$$1, 2, 3, 6, 9, 18$$

$$a = 9 \rightarrow b = 6 + 6 = 12$$

$$a = 12 \rightarrow \vdots$$

$$a = 15 \rightarrow$$

$$a = 24 \rightarrow$$

- [ 7, 24, 25
- 8, 15, 17
- 9, 12, 15

$$49 + 576 = 625$$

$$64 + 225 = 289$$

$$81 + 144 = 225$$

(16)

T - 3/100 = 97/100 T      100 | T

1<sup>er</sup> valeur : T/2 → 47/100 T

2<sup>e</sup> " : T/3 ou T/4

① 3 | T : ~~T/3~~ → 141/300 T

2<sup>e</sup> : ~~T/3~~ → 41/300 T

~~300 | 41~~  
41 x 7 = 287

3<sup>e</sup> : T/8, T/9 ou T/10

a) 8 | T : 82/600 T

3<sup>e</sup> : T/8 → 7/600 T

~~600 | 7~~  
7 x 86 = 602

4<sup>e</sup> : 7/600 T - T/n = 1

600 (7k-1) 86

7nT - 600T = 600n

n = 600T / (7T - 600) = 600k / (7k - 1) = (-2k + 86) / (7k - 1) + ent.

~~k=1, k=2~~

k = 1, 2, 3 → T = 600 ou ~~1800~~

↓  
100

→ n = 90

OK

b) 8 | T, 9 | T : 123/900 T

3<sup>e</sup> : T/9 → 23/900 T

4<sup>e</sup> : 23/900 T - T/n = 1      ~~n=900~~ T = 900k

~~23nT - 900~~ 23k - 900k/n = 1

n = ~~900k-1~~ 900k / (23k-1) = ent + (3k+39) / (23k-1)

23 x 39 = 897

~~8 | 23~~

k = 2 → T = 1800      8 | T non