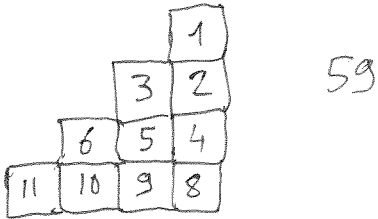


5

G ment  $\rightarrow$  imp. (4)

$\Rightarrow$  G et M: vérité, E ment  $\rightarrow$  Elane

6



7

1467 # towers = 45

$$N = 46 + 45 = \underline{\underline{91}}$$

8

base  $\times$  h

$$x = 1 \times \sin \alpha \quad 4x = 8 \quad x = 2$$

~~base  $\times$  h = 81~~  ~~$\rightarrow$   $\sin \alpha = \frac{1}{3}$~~

$$S = \text{area } x = 2 \text{ cm}^2$$

10

$$A: x \times 1,15 \times 1,05 = 287,5$$

$$G: x \times 1,08 \times 1,05 = y$$

$$y = 287,5 \times \frac{1,08}{1,15} \times 1,05 \quad \text{B7,5}$$

$$= 2,5 \times 108 = \underline{\underline{270}}$$

$$\times 1,05 = 270 \times 1,05 = 270 + 13,5$$

$$= \underline{\underline{283,5}}$$

11

Sac plein : p

$$\text{Puis } N: \frac{2}{3}p \rightarrow \frac{5}{6}p \times 2$$

$$[1600 \rightarrow 2 \times 2000$$

$$1500 / 2000$$

$$V: \frac{3}{4} \left( \frac{5}{6}p \right)$$

$$\frac{1}{4} \left( \frac{5}{6}p \right) = 500g \rightarrow p = \frac{2400g}{5} = \underline{2,4 kg}$$

12

$$x^2 \equiv 2001 \pmod{10000}$$

$$x = 10k \pm 1$$

$$100k^2 \pm 20k + 1 \equiv 2001$$

6

$$10k^2 \pm 2k \equiv 200 \pmod{1000}$$

$$\begin{array}{r} 249 \\ \times 249 \\ \hline 62001 \end{array}$$

$$k = 5l$$

$$250l^2 \pm 10l \equiv 200$$

$$25l^2 \pm l \equiv 20 \pmod{100}$$

$$l = 5m$$

$$5^4 m^2 \pm 5m \equiv 20$$

$$125m^2 \pm m \equiv 4 \pmod{20}$$

$$5m^2 \pm m \equiv 4 \pmod{20}$$

$$m = 1, l = 5, k = 25, x = \underline{249}$$

(13)

$$\begin{array}{l} S < E < J \\ S < J \end{array} \quad \begin{array}{l} S < E < J \\ J - S = 4 \end{array}$$

$$S + E + E + J + S + J + S + E + J = 3(S + E + J)$$

$$J - E + J - S + E - S = 2(J - S) = 8$$

$$\frac{3}{8}(S + E + J) = J$$

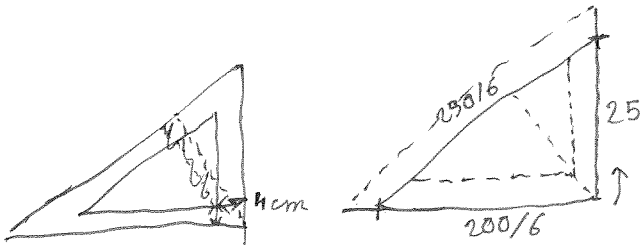
$$\boxed{3(S + E) = 5J} \quad S = J - 4$$

$$3E - 12 = 2J$$

- $E = J - 1 \rightarrow J - 15 = 0 \rightarrow J = \underline{15}, E = 14, S = 11$
- $E = J - 2 \rightarrow J = \underline{18}, E = 16, S = 14$
- $E = J - 3 \rightarrow J = \underline{21}, E = 18, S = 17$

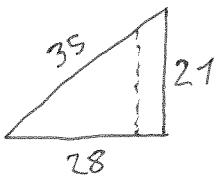
3 sol<sup>o</sup>

(14)



125/3  
100/3  
25

$$h = \frac{30 \times 40}{50} = 24 \rightarrow \frac{20}{24} = \left(\frac{5}{6}\right) \times \frac{21}{25}$$



$$\times \frac{24}{28} = \frac{6}{7}$$

$$\rightarrow \text{BQ} \quad \begin{array}{l} 30 \\ \triangle \\ 24 \end{array} \quad 18 \rightarrow \underline{72}$$

(15)

1 2 3 4 5 6 7 8

0q:  $(\frac{2}{3})^8$

$(\frac{2}{3} + \frac{1}{3})^8$

1q:  $(\frac{2}{3})^7 \frac{1}{3} \times 8$

123 → 8

124) → 8 × 2

~~123~~  
~~124~~

2q:  $(\frac{2}{3})^6 (\frac{1}{3})^2 \times \underbrace{(\frac{8 \times 7}{2} - 4)}_{24}$

3q:  $(\frac{2}{3})^5 (\frac{1}{3})^3 \times \frac{8}{24}$

4q:  $(\frac{2}{3})^4 (\frac{1}{3})^4 \times 8$

256 + 1024 + 1536 + 768 + 128 =

1280

2816

3584

3712

$3^8 = 729 \times 9 = 6561$

- 896
- 2432
- 3456
- 3712

(16)

0 X 0 0 0 ---  
 1 X X 0 0 ---  
 2 X 0 X 0 0 0  
 3 X X X X 0 0 ---  
 4 

X	0	0	0	X	0	0	---	
X	X	0	0	X	X	0	0	---
X	0	X	0	X	0	X	0	---
X	X	X	X	X	X	X	X	00---

1  
 3  
 5  
 15  
~~17~~  
 54

1000?  
 $C_n^p [2]$

$$1000 = 1111100111 + 1$$

$$= 11111001000$$

→ 6 chiffres 1

→  $2^6 = \underline{64}$