

13) $2024 \times 16/9$?

$$\begin{array}{r} 20240 \\ 12144 \\ \hline \end{array}$$

$$32384 / 9 = \underline{3598} + 2/9$$

14)


| | | |
|----------------------|----------------------------|-------------|
| 1 2 3 4 5 | 2 1 3 4 5 6 7 8 | |
| 2 1 3 4 5 | 4 2 1 3 5 6 7 8 | |
| 3 2 1 4 5 | 6 4 2 1 3 5 7 8 | |
| 4 3 2 1 5 | 8 6 4 2 1 3 5 7 | ← 1 mélange |
| 5 4 3 2 1 | | |

□

| | | | | | | | | | | | | | | | | |
|---------------|----|----|-----|----|---|----|----|----|----|----|----|----|---|----|----|----|
| 1 | 6 | 14 | 12 | 10 | 8 | 6 | 4 | 2 | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 |
| 15 | 11 | 7 | 3 | 2 | 6 | 10 | 14 | 16 | 12 | 8 | 4 | 1 | 5 | 9 | 13 | |
| 13 | 5 | 4 | 12 | 14 | 6 | 3 | 11 | 15 | 7 | 2 | 10 | 16 | 8 | 1 | 9 | |
| 9 | 8 | 10 | 7 | 11 | 6 | 12 | 5 | 13 | 4 | 14 | 3 | 15 | 2 | 16 | 1 | |
| 1 | 2 | 3 | ... | | | | | | | | | | | | | |

→ 5

15)



$$r = R/2 \rightarrow \pi r$$



$$\rightarrow 2\pi R/6 = 2\pi r/3$$

rapp. 2/3

$$12 \times 2/3 = \underline{\underline{8}}$$

16) a : 27g

b : 24g

c : 20g

a < b < c

→ 0, 4, 7 (poids réduits)

~~4m + 7n = 100~~

~~(0, 28, 56, 84)~~, ~~(0, 28, 56, 84, 112)~~

~~(0, 20)~~, ~~(0, 16)~~, ~~(7, 12)~~, ~~(14, 8)~~, ~~(21, 4)~~, ~~(28, 0)~~

R

m = a - 2 n = b - 2 p = c - 2 ≥ 0

7m + 4n connu m < n < p m + n + p connu
= 94

Si Δm = 4, Δn = -7 et Δp = 3.

(m, n, p) avec m max m < n < p

(m - 4, n + 7, p - 3)

⋮

(m - 16, n + 28, p - 12)

n + 28 < p - 12

p - n > 40

(16, 17, ~~58~~ 61) p - n = 44

(16, 18, 60) p - n = 42

(17, 18, 59) p - n = 41

3 sol^o

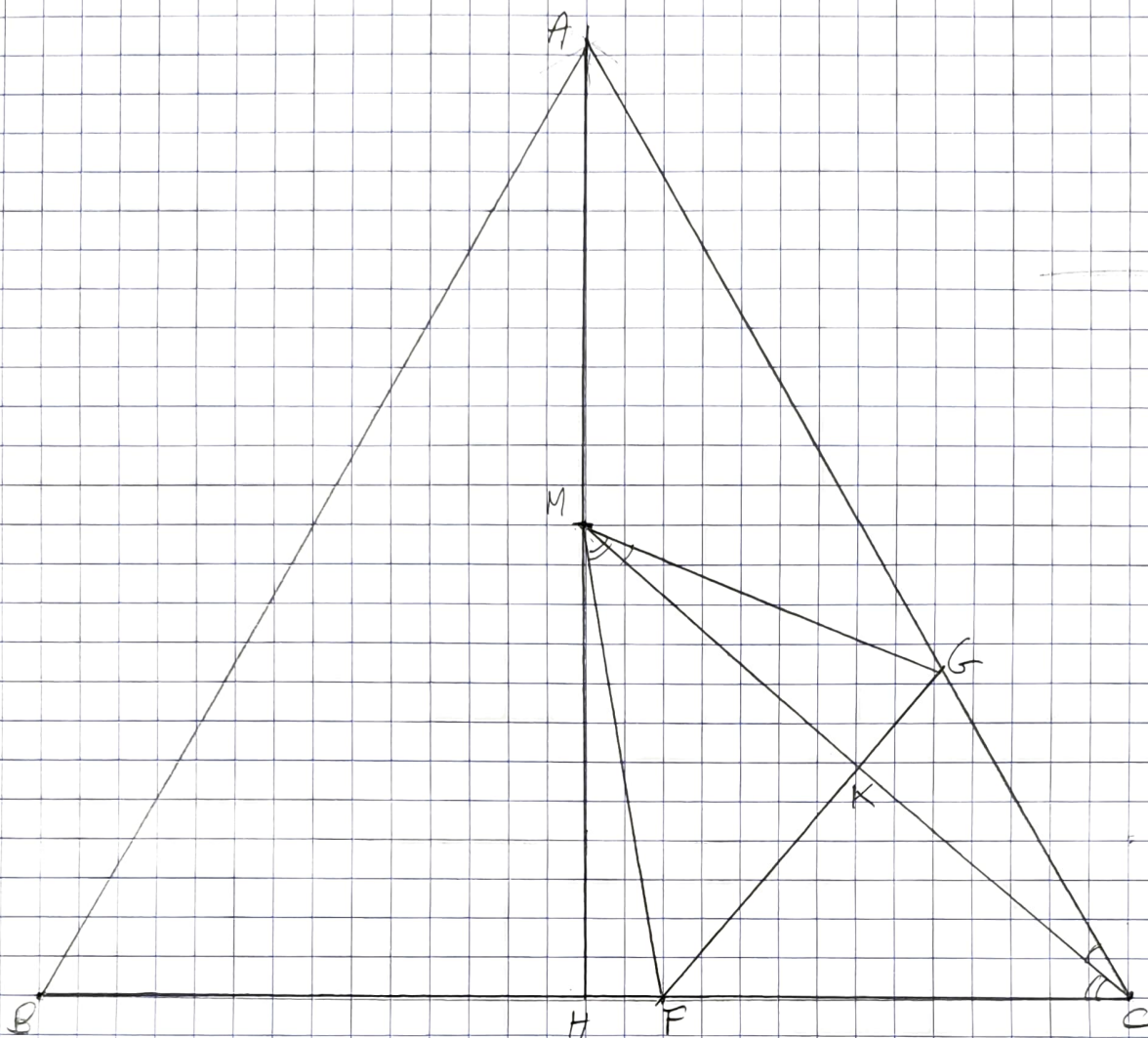
(a, b, c) = (18, 19, 63) → 100 × 20 + 18 × 7 + 19 × 4

(18, 20, 62) = 2000 + 126 + 76

(19, 20, 61) = 2202

2202 + ~~77~~ 4 = 2206

17



$$C(7,0) \quad M(0, 7\sqrt{3}/2)$$

$$K(7/2, 7\sqrt{3}/4) \quad \begin{pmatrix} \sqrt{3}/2 \\ 1 \end{pmatrix}$$

$$\frac{\sqrt{3}}{2}(x - 7/2) - (y - 7\sqrt{3}/4) = 0$$

$$\frac{\sqrt{3}}{2}x + y - 7\sqrt{3}/2 = 0$$

$$(x - 7/2) - \frac{\sqrt{3}}{2}(y - 7\sqrt{3}/4) = 0$$

$$2 \cdot 1/8 - 7/2 = -\frac{7}{8}$$

$$x - \frac{\sqrt{3}}{2}y - \frac{7}{8} = 0$$

$$\rightarrow x_F = 7/8$$

$$G: \begin{cases} x - (\sqrt{3}/2)y = 7/8 \\ 2x + y = 14 \end{cases}$$

$$2x + y = 14$$

$$y_G = (14 - 7/4) / (1 + \sqrt{3})$$

$$y_G = 49 / (4(1 + \sqrt{3}))$$

$$CF = 7(1 - 1/8) = 49/8$$

$$\text{Area}(CFG) = \frac{49^2}{64(1 + \sqrt{3})}$$

17. write

$$\text{Aire (CFG)} = \frac{49^2 (\sqrt{3} - 1)}{128}$$

$$\begin{array}{r} 732 \\ \times 49 \\ \hline 6588 \\ 29280 \\ \hline 35868 \\ \times 49 \\ \hline 322812 \\ 143472 \\ \hline 1746532 \\ 3 \end{array}$$

$$\begin{array}{r} 35868 \\ 179340 \\ \hline 35868 \\ 4 \\ \hline 1757532 \\ 5 \end{array}$$

$$1757532 / 8 = 219691$$

$$219691 / 8 = 27461$$

$$27461 / 2 = 13730,5$$

$$\text{Aire (CFG)} \approx 1373,1$$

$$219691 / 4 = 54922,75$$

$$4 \text{ Aire} = 5492,3$$

$$7 \times 14 \times \sqrt{3} / 2 = 49 \sqrt{3} \approx$$

$$\begin{array}{r} 1,732 \times 50 = 86,60 \\ - 1,732 \\ \hline 84,9 \end{array}$$

$$- 54,9 = 30?$$