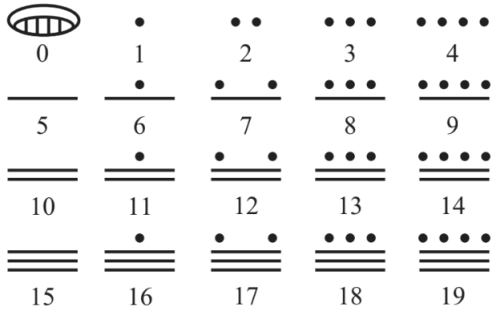
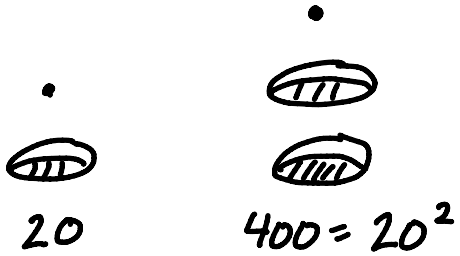
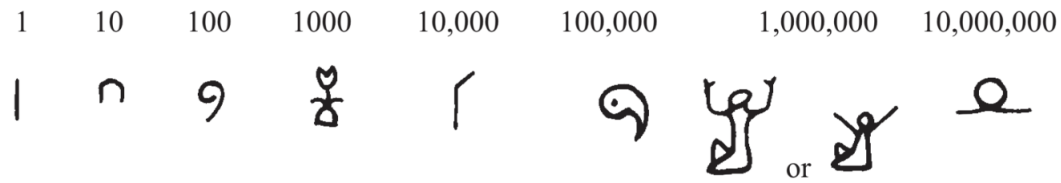
From our text:

Mayan Numerals





Egyptian Hieroglyphs

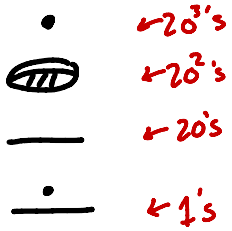


Ionian Alphabetic System

1 α	10 ι	100 ρ
2 β	20 κ	200 σ
3 γ	30 λ	300 τ
4 δ	40 μ	400 υ
5 ε	50 ν	500 ϕ
6 ς	60 ξ	600 χ
7 ζ	70 o	700 ψ
8 η	80 π	800 ω
9 θ	90 $\qoppa$	900 $\sampi$

1. Write each number below in our system.

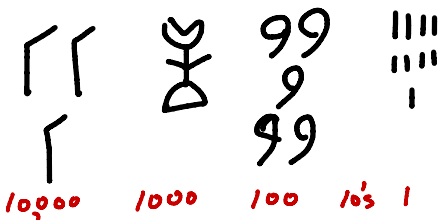
(a) (Mayan)



$1\cdot 20^3 + 0\cdot 20^2 + 5\cdot 20 + 6\cdot 1$

$= 8106$

(b) (Egyptian heiroglyphs)



31,509

← Do you see that is better than ?

(c) (Ionian alphabetic)

θ ο φ

↑ ↑ ↑

9 70 500

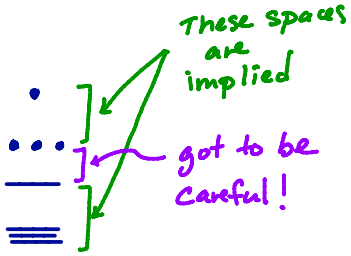
579

2. Write the number 9235 using each system below.

(a) (Mayan)

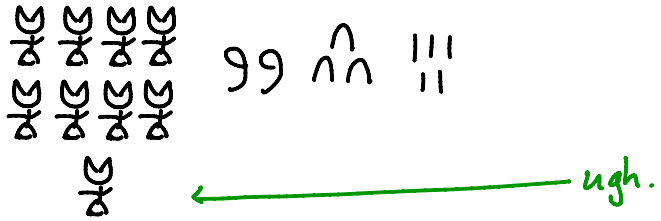
Answer :

thinking.



$9235 = 1\cdot 20^3 + 3\cdot 20^2 + 1\cdot 20 + 15$

(b) (Egyptian heiroglyphs)



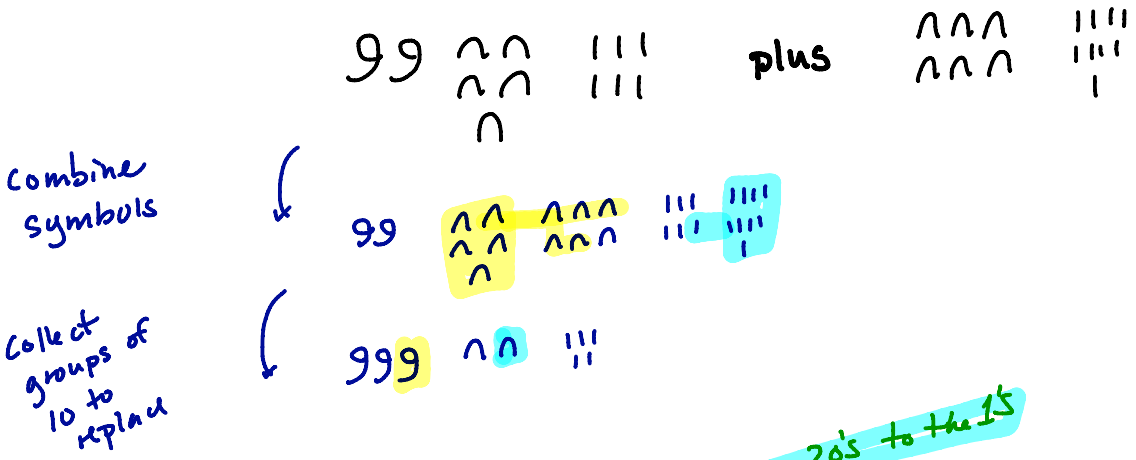
(c) (Ionian alphabetic)

,θ ο λ ε

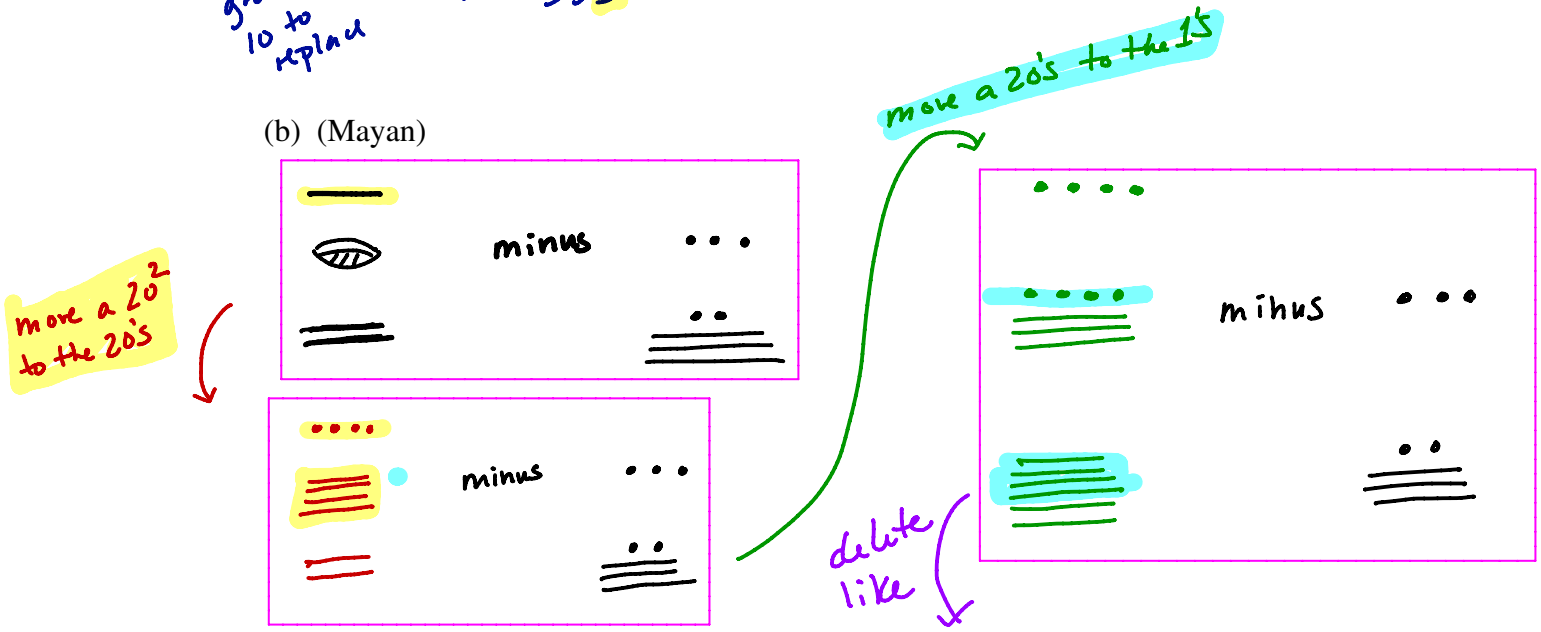
↑ This indicates the symbol should be multiplied by 1000.

3. Perform the operations below **in the given numerical system**. Describe the algorithm and deduce the needed memorization.

(a) (Egyptian)



(b) (Mayan)



(c) (Ionian alphabetic)

$\pi\beta$ multiplied by $K\eta$

need to know:

$\pi \times K = \alpha\chi$

$\pi \times \eta = \chi\mu$

$\beta \times K = \mu$

$\beta \times \eta = \iota\varsigma$

then add all these up to get

$\alpha\chi\chi\mu\mu\iota\varsigma = \beta\sigma\varphi\varsigma$

This feels hard.