

Numeration chinoise à bâtons :

$$(314)_{10} = \text{III} \text{ --- } \text{IIII}$$

... 2 1 0

$$\text{--- III} \rightsquigarrow (13)_{10}$$

$$\text{I III} \rightsquigarrow (103)_{10} \text{ or } (10003)_{10}?$$

Numeration Shadok :

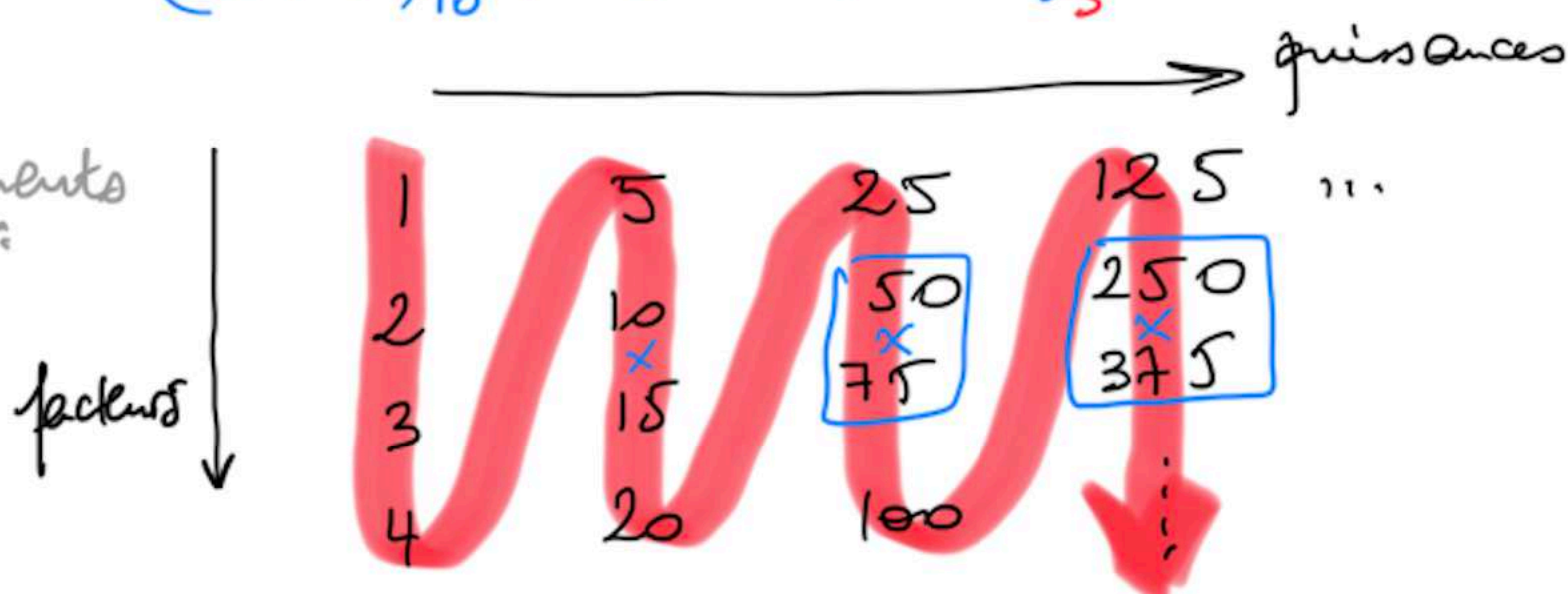
$$\begin{array}{cccc} \text{GA} & \text{BU} & \text{ZO} & \text{MEU} \\ 0 & \text{---} & \text{┐} & \Delta \end{array}$$

$$(\text{---} \text{┐} \text{---})_{\text{Shadok}} = 1 \times 4^2 + 2 \times 4^1 + 1 \times 4^0 = 16 + 8 + 1 = (25)_{10}$$

Conversions

$$(314)_{10} = ( \quad ? \quad )_5$$

méthode  
par encadrements  
successifs :



$$\begin{array}{l} 2 \cdot 5^3 < 314 < 3 \cdot 5^3 \\ 2 \cdot 5^2 < 64 < 3 \cdot 5^2 \\ 2 \cdot 5^1 < 14 < 3 \cdot 5^1 \\ 4 \cdot 5^0 < 4 < 1 \cdot 5^1 \\ \hline 0 \end{array}$$

méthode par divisions successives :

$$\begin{array}{r} 314 \div 5 = 62 \text{ r } 4 \\ 62 \div 5 = 12 \text{ r } 2 \\ 12 \div 5 = 2 \text{ r } 2 \\ 2 \div 5 = 0 \text{ r } 2 \end{array}$$

$$(314)_{10} = (2224)_5$$

méthode de Horner :

$$(314)_5 = ( \quad ? \quad )_{10}$$

$$\begin{array}{l} ((3) \times 5 + 1) \times 5 + 4 \\ \downarrow \quad \downarrow \quad \downarrow \\ 15 \quad 16 \quad 80 \quad 84 \end{array}$$

$$(314)_5 = (84)_{10}$$

Vérification :

$$\begin{array}{r} 84 \div 5 = 16 \text{ r } 4 \\ 16 \div 5 = 3 \text{ r } 1 \\ 3 \div 5 = 0 \text{ r } 3 \end{array}$$

ok.