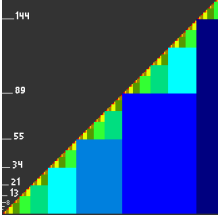




Définition de la suite de Fibonacci

$$F_1 = 1, F_2 = 1$$

$$\forall n \in \mathbb{N}^*, F_{n+1} = F_n + F_{n-1}$$



Théorème de représentation de Zeckendorf

$$\forall n \in \mathbb{N}^*, \exists k \in \mathbb{N}^*, \exists (\alpha_1, \alpha_2, \dots, \alpha_k) \in \mathbb{N}^{*k}; \forall i \in \{1, \dots, k-1\} : \alpha_{i+1} \geq \alpha_i + 2$$

$$n = \sum_{i=1}^k F_{\alpha_i}$$

Applications : $19 \times 40 = \dots$ et $\dots \times 5 = 75$

$19 \times 40 = \dots$

1	40
+	
1	40
+	
2	80
+	
3	120
+	
5	200
+	
8	320
+	
13	520

$19 = 13 + 5 + 1$

$520 + 200 + 40 = 760$

$19 \times 40 = 760$

$\dots \times 5 = 75$

1	5
+	
1	5
+	
2	10
+	
3	15
+	
5	25
+	
8	40
+	
13	65

$75 = 65 + 10$

$13 + 2 = 15$

$15 \times 5 = 75$