

Question 1

Soit u une suite arithmétique de raison 5 et de premier terme $u_0 = 1$.
Calculer u_4 .

Question

$$\begin{array}{l} 1) u_0 = 1 \\ u_1 = 1 + 5 = 6 \\ u_2 = 6 + 5 = 11 \\ u_3 = 11 + 5 = 16 \\ u_4 = 16 + 5 = 21 \end{array} \quad \left| \quad u_4 = 1 + 4 \times 5 = 21$$

Question 2

Soit v une suite géométrique de raison 3 et de premier terme $v_0 = 2$.
Calculer v_5 .

$$\begin{array}{l} 2) v_0 = 2 \\ v_1 = 2 \times 3 = 6 \\ v_2 = 6 \times 3 = 18 \\ v_3 = 18 \times 3 = 54 \\ v_4 = 54 \times 3 = 162 \\ v_5 = 162 \times 3 = 486 \end{array} \quad \left| \quad v_5 = 2 \times 3^5 = 486$$

Question 3

Soit w une suite définie par $w_0 = 5$ et $w_{n+1} = 4w_n - 6$,
 $n \in \mathbb{N}$.
Calculer w_3 .

$$\begin{array}{l} 3) w_0 = 5 \\ w_1 = 4 \times 5 - 6 = 14 \\ w_2 = 4 \times 14 - 6 = 50 \\ w_3 = 4 \times 50 - 6 = 194 \end{array}$$

exercice

$$\begin{cases} u_0 = 2 \\ u_{n+1} = 4u_n, n \in \mathbb{N} \\ u_3 = 4^3 \times 2 = 128 \\ u_5 = 4^5 \times 2 = 2048 \end{cases}$$

$$\begin{cases} u_0 = 5 \\ u_{n+1} = u_n + 7 \\ u_6 = 5 + 6 \times 7 = 47 \end{cases}$$