

CORRECTION

EXERCICE n°2 :

1. On a : $u_n = 3^{1-2n}$ alors :

$$\frac{u_{n+1}}{u_n} = \frac{3^{1-2(n+1)}}{3^{1-2n}} = \frac{3^{-1-2n}}{3^{1-2n}} = 3^{-1-2n-(1-2n)} = 3^{-2} = \frac{1}{3^2} = \frac{1}{9}.$$

Donc la suite (u_n) est une suite géométrique de raison $\frac{1}{9}$ et de premier terme $u_0 = 3$.

2. On a :

$$u_{n+1} = 3^{1-2(n+1)} = 3^{-1-2n}.$$

$$u_{n-2} = 3^{1-2(n-2)} = 3^{5-2n}.$$

$$u_{2n} = 3^{1-2(2n)} = 3^{1-4n}.$$

$$u_{2n+1} = 3^{1-2(2n+1)} = 3^{-1-4n}.$$

$$u_{2n-1} = 3^{1-2(2n-1)} = 3^{3-4n}.$$

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