

Geometric sequence is defined as sequence $b_1, b_2, \dots, b_n, \dots$ where for some constant q : $\frac{b_n}{b_{n-1}} = q$ for every $n > 1$.

We know that $b_n = b_1 * q^{n-1}$

Then $b_2 = b_1 * q = 3, b_5 = b_1 * q^4 = 81$

Next step is to find q :

$$\frac{b_5}{b_2} = \frac{81}{3} = 27$$

In other hand

$$\frac{b_5}{b_2} = q^3$$

So $q^3 = 27, q = 3$.

$$b_2 = b_1 * q = 3$$

$$b_1 * 3 = 3$$

$$b_1 = 1$$

Then $b_3 = b_1 * q^2 = 1 * 3^2 = 9$