

Recursive Formula for Geometric Sequences

Geometric sequences represent exponential functions.

$$f(n) = f(n - 1) * r$$



Next term
↳ term you want.



NOW
↳ previous term.



Common ratio.
What you are multiplying by each time.

Examples: Find the recursive formula for the following sequences

1. 6, 18, 54, 162...

$$f(n) = f(n-1) \cdot 3 \quad f(1) = 6$$

2. 5, 25, 125, 625...

$$f(n) = f(n-1) \cdot 5 \quad f(1) = 5$$

3. 60, 30, 15, ...

$$f(n) = f(n-1) \cdot \frac{1}{2} \quad f(1) = 60$$

4. 2, -18, 162, -1458...

$$f(n) = f(n-1) \cdot -9 \quad f(1) = 2$$

*Remember you need to write your starting term with recursive functions!