

Geometric Sequences – Find a_n

To find the n th term of an Geometric Sequence, use the formula

$$a_n = a_1 r^n$$

Determine if the following are geometric sequences. If it is geometric, write an equation describing the sequence.

1. 2, 4, 8, 16, ...
2. 1, 5, 25, 125, ...
3. 2, 8, 32, 128, ...

Find the n th term of the following sequences.

4. 3, 6, 12, 24, ... Find the 21st term.
5. 4, 20, 100, 500, ... Find the 11th term.
6. 12, 6, 3, 3/2 ... Find the 31st term.
7. $\frac{1}{4}$, $\frac{1}{2}$, 1, 2 ... Find the 101st term.
8. -24, 12, -6, 3, ... Find the 9th term.
9. 4, 12, 36, ... Find the next three terms of the sequence.
10. Explain why the sequence 1, 2, 2, 3, 5, 8, ... is not a geometric sequence.