Vocabulary: Arithmetic and Geometric Sequences

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**Vocabulary**

* Arithmetic sequence – a sequence in which the difference between any two consecutive terms is the same.
* For example, 2, 6, 10, 14, … is an arithmetic sequence.
* Common difference – the difference between consecutive terms in an arithmetic sequence.
  + For example, the arithmetic sequence 2, 6, 10, 14, … has a common difference of 4.
* Common ratio – the ratio of consecutive terms in a geometric sequence.
  + For example, the geometric sequence 1, 3, 9, 27, … has a common ratio of 3.
* Explicit formula – an equation that can be used to directly calculate any term in a sequence.
* The explicit formula for an arithmetic sequence is *an* = *a*1 + (*n* – 1)*d*, where *an* is the *n*th term, *a*1 is the first term, and *d* is the common difference.
* The explicit formula for a geometric sequence is *an* = *a*1 • *rn* – 1, where *an* is the *n*th term, *a*1 is the first term, and *r* is the common ratio.
* Geometric sequence – a sequence in which the ratio of any two consecutive terms is the same.
* For example, 1, 3, 9, 27, … is a geometric sequence.
* Sequence – an ordered list of numbers.
* Each number in a sequence is called a *term*.