Vocabulary: Arithmetic Sequences

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**Vocabulary**

* Arithmetic sequence – a sequence in which the difference between consecutive terms is constant.
  + For example, the sequence 3, 8, 13, 18, … is arithmetic because the difference between any pair of consecutive terms is 5.
  + An arithmetic sequence is sometimes called an *arithmetic progression*.
* Common difference – the difference between any two consecutive terms in an arithmetic sequence.
* Explicit formula – a rule that allows direct calculation of any term in a sequence.
  + In general, the *n*th term in an arithmetic sequence is given by: *an* = *a1* + (*n* – 1)*d*, where *a*1 is the first term and *d* is the common difference.
  + The *n*th term of the sequence 3, 8, 13, 18, … is described by the explicit formula *an* = 3 + (*n* – 1)5.
* Recursive formula – a rule that allows you to find a term in a sequence, based upon the previous term.
  + In general, the recursive formula for the *n*th term of an arithmetic sequence is defined by the first term, *a*1,and the recursive rule, *an*= *an* – 1 + *d*.
  + The sequence 3, 8, 13, 18, … is recursively given by: *a*1 = 3 and *an* = *an* – 1 + 5.
* Sequence – an ordered list of numbers.
* Term – a number or item in a sequence.