11-1 Arithmetic Sequences

<u>Objective:</u> Use arithmetic sequences. Find arithmetic means.

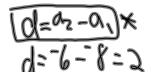
Sequence: A sequence is a list of numbers in a particular order. Each number in a sequence is called a term.

Arithmetic Sequence is a sequence in which each term after the first is found by adding a constant, called the difference, to the previous term.

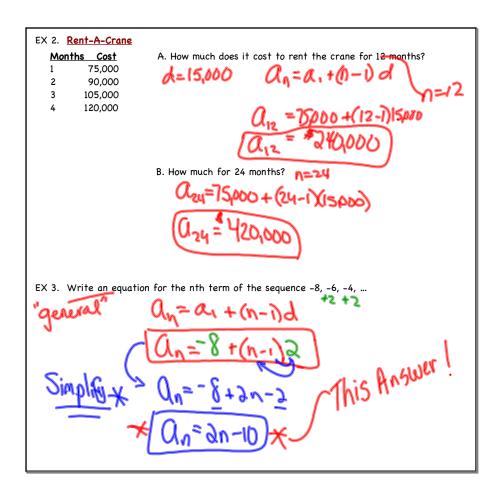
 $a_n=a_1+(n-1)d$, where n is any positive integer.

 a_n is the nth term a_1 is the first term a_n is positive or negative, depending on if increasing or decreasing.

EX 1. Find the next 4 terms: -8, -6, -4, ...







<u>Arithmetic Mean</u>: Sometimes you are given 2 terms of a sequence, but they are not successive terms. The terms between any 2 non-successive terms of an arithmetic sequence are called arithmetic means.

EX 4. Find the 3 arithmetic means between 21 and 45.

EX 5. Find 4 arithmetic means between 16 and 91.