

11.1 Arithmetic Sequences

1. Use Arithmetic sequences,
2. Find Arithmetic Means

A *sequence* is a list of numbers in a particular order that **has a pattern**.

Each number in the sequence is called a *term*.

An *arithmetic sequence* is a sequence of numbers in which each term after the first is found by *adding a constant*, called the common difference, **d**.

Formula for finding the nth term of
a sequence is:

$$a_n = a_1 + (n-1)d$$

a_n = nth term

a_1 = 1st term

d = difference or pattern

n = number of terms

Find the next 4 terms of the arithmetic sequence 55, 49, 43,...

First find what the pattern $d =$

2) What is the 10th term?

Arithmetic Means

The terms between any two non-successive terms are called *arithmetic means*.

The sequence 19, 30, __, __, __, 74, 85 has 3 arithmetic means.
What are they?

Find “d” using the previous formula:

$$a_n = a_1 + (n-1)d.$$

$$a_1 =$$

$$a_n =$$

$$n =$$

What are the 4 arithmetic means
between 16 and 91?

Homework

p. 581 # 15-40 all

MEMORIZE IT!!!

$$a_n = a_1 + (n-1)d$$