Today's Learning Goal(s):

Date: _____

By the end of the class, I will be able to:

a) recognize the characteristics of arithmetic sequences.
b) write the general term.

Last day's work: pp. 404-405 #1 – 3, 6, 8 – 10, 12, 13

7.1 Arithmetic Sequences

Date: _____

Sequence: An ordered set of numbers separated by commas .
Each individual number is called a TERM.
The terms are t_1, t_2, t_3, t_4, ... , t_n (*the ... is called an ellipsis*)

Arithmetic Sequence:
A sequence that has a common difference between the terms.
(ie. you add or subtract something to get from one term to the next).

Ex.1   Consider the following sequence: 5, 8, 11, 14, 17, ...   *often only 3 terms given*

In an arithmetic sequence, the first term is **a** and the common difference is **d**
∴ the terms are *a, a+d, a+2d, a+3d, ...*

The general term is $t_n = a + (n-1)d$

a) What is the 20th term?   b) Which term is 341?

Ex.2   State the first five terms for the following recursive formulas.

a) $t_1 = 8$, $t_n = 6 + t_{n-1}$, $n \in \mathbf{N}$, $n > 1$ b) $t_1 = 5$, $t_n = 2t_{n-1} + n$, $n \in \mathbf{N}$, $n > 1$

Ex.3   The sixth term of an arithmetic sequence is 9, and the 20th term is 44.
Find the 101st term.

Are there any Homework Questions you would like to see on the board?

Last day's work: pp. 404-405 #1 – 3, 6, 8 – 10, 12, 13

Today's Homework Practice includes:
pp. 424-425 #1 – 13, 15, 16

Study for the Unit 6 Summative!!