Strand: **Algebra** **Name:__*KEY*____**

Skill Addressed: Linear Relationships Explored **Blk: ___**

Activity: *Part 3: Arithmetic Sequence*

The following are examples of Arithmetic Sequences:

3, 5, 7, 9, 11…
15, 10, 5, 0, -5…
13, 16, 19, 22, 25…

Consider the last example 13, 16, 19, 22, 25…
What do you notice about each subsequent term of this sequence?
____***each term increases by 3 (common difference)***_____
_____

What must you do to find the next missing term?
_____***add three***_____

Arithmetic Sequence Definitions and Vocabulary:

Common Difference: the difference between any term and the term before it ex) 22 – 19 = _***3***_

First Term: the term where the sequence begins. Here the first term is 13.

The n^{th} Term: a general rule for finding any term of the sequence. For example, how could you find the 8^{th} term? It may help to write a table:

Term #	1	2	3	4	5	6	…	n
Term Value	13	16	19	22	25	28		

Can you find a formula for the n^{th} term?

$t_n = 3n + 10$

