Name: _____ Date: _____

Arithmetic Sequences

A _____ is a function whose domain is a set of consecutive whole numbers. This makes the domain for EVERY sequence {1, 2, 3, 4, …}. The range would be the **terms of the sequence** (the numbers in the list). The sequence can be specified by an equation or a rule.

An _____ sequence is a sequence of terms that have a common _____ between them.

Explicit Formula: (used to find a specific term in the sequence) Make sure you **SIMPLIFY!**

Before: $a_n = a_1 + d(n-1)$ After: _____

$a_n =$ $a_1 =$

$d =$ $n =$

Determine if the sequence is arithmetic:

2, 5, 8, 11, …

Find the explicit equation:

2, 5, 8, 11, …

Determine if the sequence is arithmetic:

¼, ½, 1, 2, …

Determine if the sequence is arithmetic:

7, 3, -1, -5, …

Find the explicit equation:

7, 3, -1, -5, …

How else can we represent it?

Find the common difference, the explicit formula, and the tenth term.

3, 9, 15, 21, …

Graphing arithmetic sequences:

The key is realizing that the explicit formula simplified is the same as _____.

Graph: $a_n = -2n + 4$

You try: $a_n = -\frac{2}{3}n - 4$