

Name: _____ Date: _____ Row: _____ Period: _____

SECTION 11.2: ARITHMETIC SEQUENCES AND SERIES

ARITHMETIC SEQUENCE

In an arithmetic sequence, the _____ between consecutive terms is _____.

The constant difference is called the _____ and is denoted by _____.

EXAMPLE 1

Decide whether each sequence is arithmetic.

a)

b)

RULE FOR AN ARITHMETIC SEQUENCE

The n th term of an arithmetic sequence with first term _____ and common difference d is given by:

EXAMPLE 2

Write a rule for the n th term of the sequence _____

Then find _____

EXAMPLE 3

One term of an arithmetic sequence is $a_8 = 50$. The common difference is _____.

a) Write a rule for the n th term.

b) Graph the sequence.

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a) Write a rule for the nth term of the sequence

b) In an arithmetic sequence $a_{20} = -111$. The common difference is _____. Write a rule for the nth term.

EXAMPLE 4

Two terms of an arithmetic sequence are _____ and _____.

a) Write a rule for the nth term.

b) Find the value of n for which _____.

THE SUM OF A FINITE ARITHMETIC SERIES

The sum of the first n terms of an arithmetic series is:

EXAMPLE 5

Consider the arithmetic series: _____

a) Find the sum of the first _____ terms.

b) Find n such that _____