FST Name:

Notes 4.4 Date: Block:

***4.4 Geometric Sequences and Series***

Consider the following sequence. Write the sequence in RECURSIVE notation.

|  |  |
| --- | --- |
| **Geometric Sequences** | |
| Recursive Formula | Explicit Formula |
|  |  |

**Example.** Give the recursive and explicit notation for the geometric sequence.

Recursive Explicit

**Practice 1)** Give the recursive and explicit notation for the geometric sequence.

Recursive Explicit

**Practice 2)** Write the explicit formula for the geometric sequence whose common ratio is 2 and .

**Practice 3**) Two terms of a geometric sequence are and . Write an explicit formula for the sequence.

**Word Problem 1.** A virus reproduces by dividing into two, and after a certain growth period, it divides into two again. As the virus continues to reproduce, it will continue to divide in two. How many viruses will be in a system starting with a single virus AFTER 10 divisions?

**Geometric Series**

**Example 1.** Write each geometric series below in sigma notation.

a) b)