Math 4-624 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10-3 Geometric Sequences and Series

1. Describe the pattern in the sequences below:

1. 3, 9, 27, 81, ... b. 24, -12, 6, -3, ...

**Geometric Sequence:**

**Common Ratio:**

**nth Term of a Geometric Sequence**

2. Find the a12 when a1=4, r=-2

3. Write an explicit formula for each geometric sequence:

a) 3, 12, 48, 192, … b) -1.5, -3, 6, -12, …

**The Sum of n Terms of an Arithmetic Series:**

4) Find the sum of the first 11 terms of the geometric sequence: 3, -6, 12, -24, …

5) Find the indicated sum:

a)  b) 

EXTRA CREDIT:

6)In a certain sequence, t2=2 and t5=16. Find t10 if the sequence is

a) arithmetic b) geometric