

Exam Review: Sequences and Series

1. Identify each sequence as arithmetic, geometric or neither.
If it is arithmetic list the values for 'a' and 'd'.
If it is geometric list the values for 'a' and 'r'.

a) $-2, 1, 4, 7, \dots$ _____

b) $5, -10, 15, -20, \dots$ _____

c) $-3, 12, -48, 192, \dots$ _____

2. Consider the arithmetic sequence $7, 10, 13, 16, \dots$

a) Create an equation to represent the general term.

b) What is the 25th term?

c) What is the sum of the first 25 terms?

3. Consider the geometric sequence $3, 6, 12, 24,$

a) Create an equation to represent the general term.

b) What is the 12th term?

c) What is the sum of the first 12 terms?

4. Determine the first 5 terms for the sequence defined by the following recursion formula: $t_1 = 1, t_2 = 3, t_n = 2t_{n-1} - t_{n-2}$

5. Create a recursion formula for each sequence below:

a) $9, 7, 5, 3, 1, \dots$

b) $5, 10, 20, 40, 80, \dots$