Sequences and Series – Unit Practice

1. Expand the following binomial; you may use Pascal’s Triangle if needed.



1. Consider the sequence: 2, 5, 8, …, 365.
   1. Determine the 89th term.
   2. Determine the sum of the terms in this sequence.

3. Consider the sequence: 3, -6, 12, -24,...

a. Determine the 21st term.

b. Determine the sum of the terms in the sequence up to the 24th

term.

4. Create a recursive formula and general term formula for the

following sequences:

a. 54, 18, 6,…

Recursive Formula:

General Term:

b. 18, 14, 10,…

Recursive Formula:

General Term:

5. Determine the first 5 terms of the sequence defined by the

following: , , , 

6. The sum of the first 20 terms of an arithmetic sequence is 730.

The sum of the first 40 terms is 2660. What is the 50th term?

Additional Practice: pg 468 #3ac, 4, 7ace, 8, 9ac, 14ac, 15acd, 18ac, 19ac, 22ac, 23cd