**Sequences Activity – Sheet to turn in**

**Geometric and Infinite Series**

1a. Write the series modeled by the diagram

1b. Evaluate the series, what is the total of the sum, based on the shaded parts of the diagram

2. Draw your own figure to represent the series

3. What is the sum of the series.

**Fibonacci Sequence**

3a. Generate the first ten terms of the Fibonacci Sequence

3b. Sum the first ten terms of the Fibonacci sequence.

 Divide the sum by 11. What is significant about this?

3c. Choose two single digits’ numbers other than one and one. \_\_\_ and \_\_\_\_

 Generate the first ten terms of your sequence using the Fibonacci method

 Divide your sum by 11. What is significant about this?

Use your Chromebooks and a google sheet to create a Fibonacci sequence with many different first two numbers. Be creative in the numbers you choose. Sum the first ten numbers and divide by eleven. What always happens.

**Evaluating Series with your Chromebook and Google Sheets**

Using your Chromebook and a google sheet, find the sum of 15, 30, 45, 60, 75, 90, 105

This sum can be written in the following way.

|  |  |
| --- | --- |
| **n** | **Term** |
| 1 | 0.5 |
| 2 | 2 |
| 3 | 4.5 |
| 4 | 8 |
| 5 | 12.5 |
| Sum |   |

Set up a spreadsheet to evaluate the following series

To the right is shown a Google Sheet of the series. The blank box should include the total.

Now complete each of the following series.