Problem 1 – Create Sequence

1. What is your favorite number?

2. What is your 5th term?

Problem 2 – Graphically and numerically explore *n*th term formula

Use pages 2.2, 3.1, and 4.1 to explore the variables of an arithmetic sequence.

3. a. What is **n**?

b. What can you see happen in the list of data when the **n** is small?

c. What effect does **n** have on the graph?

d. Can **n** ever be negative? Explain.

4. a. What is a_1?

b. What effect does a_1 have on the graph? Explain.

5. a. What is **d**?

b. Numerically, what happens when **d** changes?

c. Graphically, what happens when **d** changes?

Problem 3 – Graph a sequence

Use page 5.2 to generate the sequence an = 5 + 2(n – 1) and then use page 5.3 to graph it.

6. What does n (column A) represent? What does an (column B) represent?

7. What is a_{15}?

8. What does the graph of the sequence look like? How is this graph similar or different from the ones on pages 2.2, 3.1, and 4.1?

Extension – Graph Another Sequence on a Data & Statistics Page

Use page 6.2 to generate and graph the sequence you made at the beginning of the activity.

What is the *n*th term for your sequence? a_n = _____