# Lesson 4 Practice Problems

1. *Technology required*. Open a blank spreadsheet. In A1, type 2 and enter.

   a. What should you type into cell A2 to generate the sequence 2, 4, 8, 16, 32, . . . when you fill down the column?

   b. What should you type into cell A2 to generate the sequence 2, 4, 6, 8, 10, . . . when you fill down the column?

2. *Technology required*. Open a blank spreadsheet. In A1, type 400 and enter.

   a. What should you type into cell A2 to generate the sequence 400, 200, 100, 50, 25, . . . when you fill down the column?

   b. What should you type into cell A2 to generate the sequence 400, 325, 250, 175, 100, . . . when you fill down the column?

3. *Technology required*. Open a blank spreadsheet.

   a. If cell A1 = 5 and cell A2 = A1 * 3 + 2, what are the first 5 terms of the sequence?

   b. If cell A1 = 1 and cell A2 = (A1 + 2) * 3, what are the first 5 terms of the sequence?

   c. If cell A1 = 2 and cell A2 = (A1 + 2) * 3, what are the first 5 terms of the sequence?

4. *Technology required*. Open a blank spreadsheet.

   a. Find the first 5 terms of a geometric sequence that starts with -5 and has a growth factor of -1.

   b. Find the first 5 terms of a geometric sequence that starts with -20 and has a growth factor of 0.5.

   c. Find the first 5 terms of an arithmetic sequence that starts with -20 and has an rate of change of 5.

   d. Find the first 5 terms of an arithmetic sequence that starts with 43 and has an rate of change of -7.

5. Here is the graph of a sequence.

value of term (y-axis, values 1 to 18)
term number (x-axis, values 1 to 8)
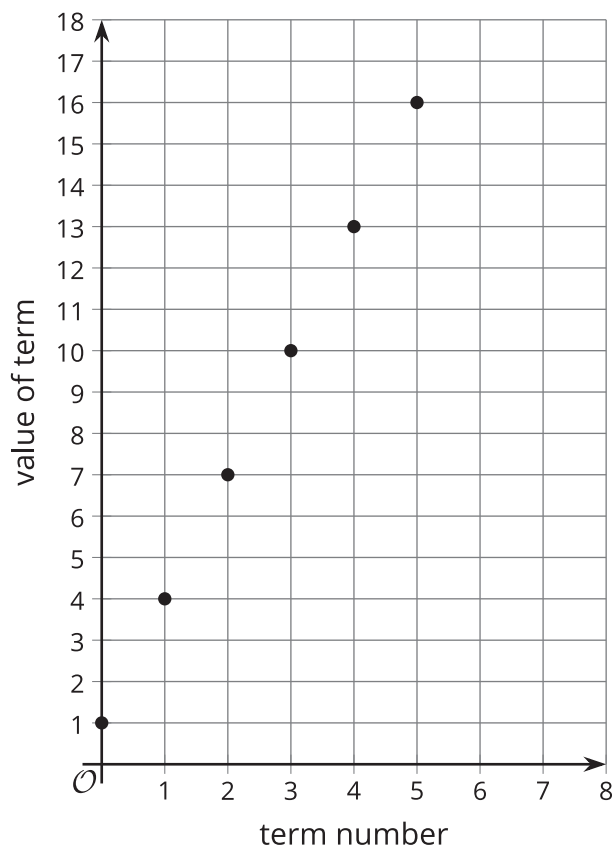
a. Explain how you know this sequence is arithmetic.

b. Explain how you know this sequence is not geometric.

(From Unit 1, Lesson 3.)

6. The first two terms of a geometric sequence are 6 and 3.

   a. Explain why there is only one geometric sequence with these first two terms.

   b. What are the next 3 terms of this geometric sequence?

(From Unit 1, Lesson 2.)