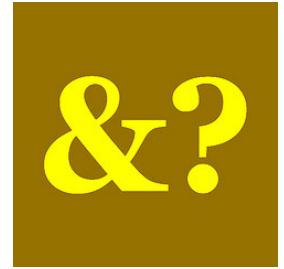# I Know . . . What Do You Know?
A Practice Task

In each of the problems below I share some of the information that I know about a sequence. Your job is to add all the things that you know about the sequence from the information that I have given. Depending on the sequence, some of things you may be able to figure out for the sequence are: a table, a graph, an explicit equation, a recursive equation, the constant ratio or constant difference between consecutive terms, any terms that are missing, the type of sequence, or a story context. Try to find as many as you can for each sequence, but you must have at least 4 things for each.

1. I know that: the recursive formula for the sequence is $f(1) = -12, \ f(n) = f(n-1) + 4$
   What do you know?

2. I know that: the first 5 terms of the sequence are 0, -6, -12, -18, -24 . . .
   What do you know?

3. I know that: the explicit formula for the sequence is $f(n) = -10(3)^n$
   What do you know?

4. I know that: The first 4 terms of the sequence are 2, 3, 4.5, 6.75 . . .
   What do you know?

5. I know that: the sequence is arithmetic and $f(3) = 10$ and $f(7) = 26$
   What do you know?

6. I know that: the sequence is a model for the perimeter of the following figures:

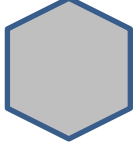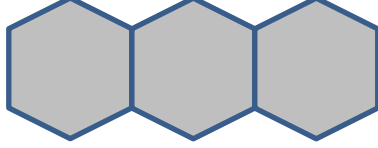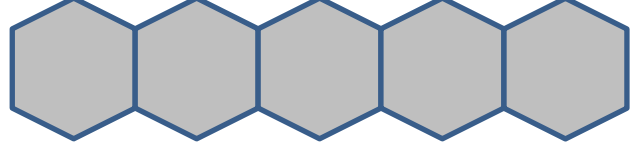Figure 1   Figure 2   Figure 3

Length of each side = 1

What do you know?

7. I know that: it is a sequence where $a_1 = 5$ and the constant ratio between terms is -2.
    What do you know?

8. I know that: the sequence models the value of a car that originally cost $26,500, but loses 10% of its value each year.
    What do you know?

9. I know that: the first term of the sequence is -2, and the fifth term is $-\frac{1}{8}$.
    What do you know?

10. I know that: a graph of the sequence is:
    What do you know?