

## 1.11 I Know ... What Do You Know?

### *A Practice Understanding 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 the 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

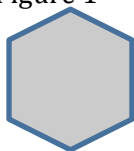


Figure 2

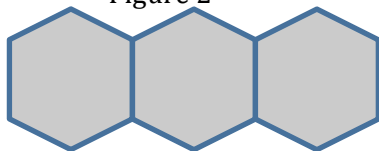
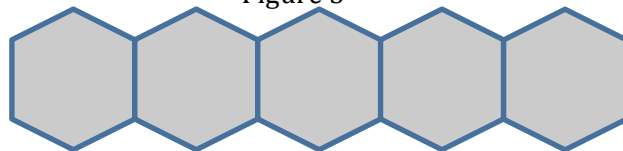


Figure 3



Length of each side = 1

What do you know?

7. I know that: it is a sequence where  $f(1) = 5$  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?

