# 9-1 Independent Practice & Application

1. For each sequence, write the next four terms.
2. 
3. 
4. 
5. 
6. The following sequences are defined by recursion formulas. Write the first four terms of each sequence.
7. 
8. 
9. 

8. 

1. For each of the following sequences, determine the recursion formula.

9. 

1. 
2. Scientists have developed a recursion formula to determine the number of insects in a given population for each interval, *n*, of time, , where k is a constant called the Malthusian factor.
3. Assuming *n* is measured in weeks, calculate the insect population for weeks 2, 3, and 4 if the initial population is 112, and the Malthusian factor for this population is -9.5.
4. Assuming *n* is measured in years, and the Malthusian factor for a species of insects is -1, what is the population in year 9 if the population in year 10 is 200?