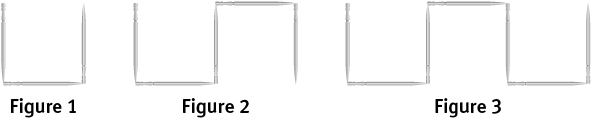
Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Homework #3

A toothpick pattern is shown below. Use the pattern for the following questions



1. Create a table to show the number of toothpicks in the first through the fifth figures, assuming the pattern continues.
2. Write the number of toothpicks in each figure as a sequence. Does the sequence have a common difference? If so, identify it. If not, explain.
3. How many toothpicks would be in the 15th figure? Justify your response using the sequence or the table.
4. Use the variable n to write an expression that could be used to determine the number of toothpicks in any figure in the pattern.