Name: _____ Date: _____

Growing Patterns

Tables & Chairs Investigation

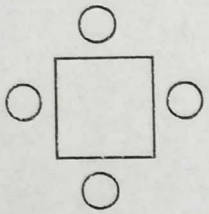

Figure 1

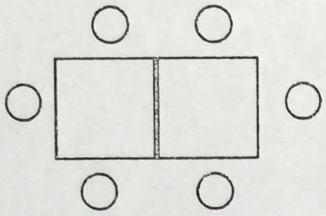

Figure 2

Figure 3

PROBLEM: Restaurants often use small square tables to seat customers. One chair is placed on each side of the table. Four chairs fit around one square table [Figure 1]. Restaurants handle larger groups of customers by pushing together tables. Two tables pushed together [Figure 2] will seat six customers.

- Draw a diagram showing how many customers would be seated at three square tables pushed together [Figure 3].
- Complete the table for reference:
- Find a pattern you can use to predict the number of customers that may be seated at any size table. Describe the pattern in words.

Number of Tables	Number of Customers
1	4
2	6
3	
4	
5	
6	

CHALLENGE:

- Use your pattern to complete this table without drawing a picture or using manipulatives.
- Write an algebraic rule for the number of customers (c) in terms of the number of tables (t).

$c =$

Number of Tables	Number of Customers
10	
25	
100	