**The Dinner Tables Problem**

With one chair on a side (as shown in the diagrams below) and one person per chair, what is the maximum number of people that can be seated at the following table arrangements?

Now complete the following function table.

|  |  |
| --- | --- |
| **Number of dinner tables** | **Number of people** |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 100 |  |
| 1,000 |  |

Explain your reasoning.

Can you represent the number of people in terms of the number of tables using a general formula? Yes! Show the algebraic expression below. Let n be the number of dinner tables.

\*Adapted from Earnest, D. “Instructional Strategies for Teaching Algebra in Elementary School”. In *Teaching Children Mathematics*. pp. 518-522. May 2008.