Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Section 1.E.3a**

**Nonlinear Patterns**

* Any function that does NOT have a constant rate of change is NONLINEAR.
* Most common nonlinear functions we will see this year are QUADRATIC and EXPONENTIAL.
* Instead, they have different patterns that we can recognize.

Quadratic Function Tables Exponential Function Tables





**Growing Shapes Pattern**



 Case 1 Case 2 Case 3

1. How do you see the shapes growing? You can use words, colors, etc. to explain.
2. Draw Cases 4 and 5.
3. Make a table with the case number as the INPUT and the number of squares as the OUTPUT.
4. What pattern do you see in the OUTPUTS?
5. How many squares would be in Case 10? In Case 50?
6. Write the function rule for the growing shapes pattern.