The “S” Pattern

1. Describe the development of this pattern?

2. How many square tiles are in step 7? Write a description that could be used to determine the shape of and total number of square tiles in step 7. Your description should be clear enough so that another person could read it and use it to think about another figure.

3. Determine an expression for the total number of squares in any figure. Explain your rule and show how it relates to the visual diagram shown above.

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Follow-up

- Find another way to describe the development of the pattern and write the expression that matches that description. Compare the two expressions and show algebraically how one expression is equivalent to the other.

- A figure has 9802 squares tiles in it. Show how you can determine the step number of this figure.

- Does the pattern describe a linear relationship between the step number and the total number of squares? Why or why not?