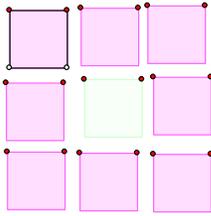


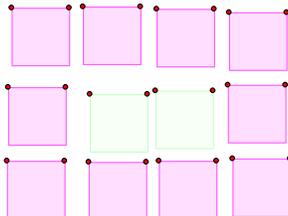
The Garden Problem

Explain your thinking for all parts of this problem.

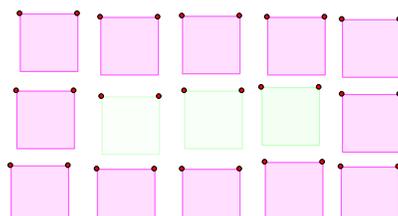
Here are three sizes of gardens framed with a single “row” of tiles:



Garden 1



Garden 2



Garden 3

1. Build and then draw the next two steps in the pattern. How many border tiles would you need for Garden 4 and for Garden 5? Explain how you know.
2. What patterns do you notice in the models/drawings?
3. How many tiles would you need to make a border around gardens of each of these lengths? Explain.
 - a. Garden 10
 - b. Garden 100
4. Find a rule to describe the number of tiles you would need for a garden of any length.
5. How does your rule relate to the model (show geometrically why your rule makes sense)?
6. Find a different rule that could be used to find number of tiles needed for a garden of any length. (Find as many different expressions as you can).