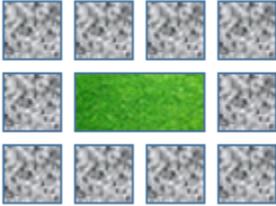


How Many Stones Will I Need?

The illustration below shows how a gardening company defines the sizes of its gardens as well as how it puts stepping stones around the outside of each.

size	pattern
1	
2	
3	

- 1.) Fill the table below with values for gardens of given sizes. Then, generalize by writing an algebraic expression that could be used to calculate the number of stones needed for a garden of size n .

Garden Size	# of Stones Wide	# of Stones Long	# of Stones Needed
1			
2			
3			
4			
5			
10			
n			

- 2.) Explain how the three algebraic expressions that you created in the bottom row relate to the gardens.

- 3.) Are your algebraic expressions in their simplest form? If not, simplify them in the space below.

- 4.) Use your simplified expression for the number of stones needed to evaluate and determine how many stones are required for a garden of size 100. Does the result make sense? Explain your reasoning.