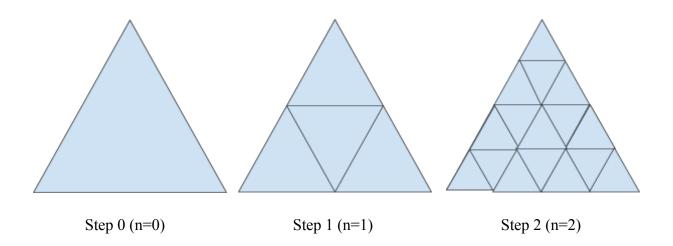
Pre-Assessment: Logarithmic Functions

1. Below is a pattern showing a triangle being successfully split into four similar triangles at each step.



1. If *n* is the step number, how many of the smallest triangles are there when *n* is 4? What about when *n* is 8?

- 2. At some step n, there are 1,048,576 smallest triangles.
 - a. Write an equation to represent the relationship between the step n and the number of triangles in step n.

b.	Explain how you might find the value of that step number.