## The Cantor Set

The graphic to the right is an attempt to depict the first few stages in the propagation of the ternary Cantor Set. Starting with a line of unit length (initiator), the open middle third is removed (generator). This process is repeated at every stage for each line remaining segment.

1. The Cantor Set evolves as a Binary Tree.
a) Given there is one segment at Stage 0, how many segments are there at Stage n? $\qquad$
b) How many total segments are there after $n$ stages? $\qquad$

 the intervals corresponding to the $n$ 'th stage.
