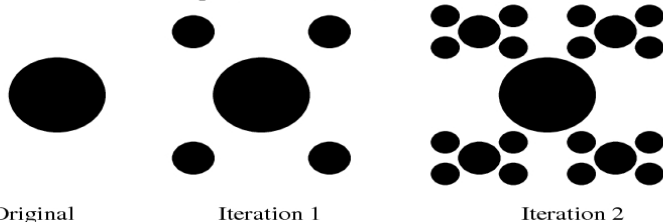


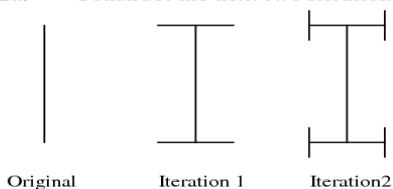
Fractals Worksheet 1

1. A circle is drawn as shown below. Iteration 1 has 4 circles created around the previous iteration. Iteration 2 has 4 circles drawn around each of the circles created in the previous iteration.



How many circles are created in Iteration 4?

- 2a. Construct the next two iterations of the fractal below.



The length of the original segment is 32 units. In each successive iteration, the length of the new segment is one-half the length of their parent segment. New segments are drawn at the end of their parent segments.

- b. Complete the chart below.

Iteration	Length of New Segment	Number of New Segments	Total Length of Fractal
Original	-----	-----	32
1			
2			
3			
4			
5			

- c. What is the length of the shortest segment in iteration 6?
- d. How many segments are created in iteration 6?
- e. What is the total length of the fractal after the sixth iteration?