

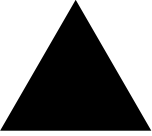




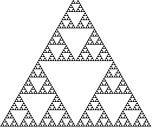
Ch 12.2: Sierpinski gasket

By Jack Schmidt

Name: _____

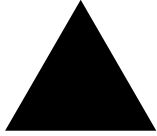




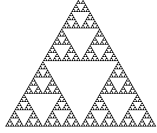
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Solve exercise #17 and 21 on page 464 to explore the area of the Sierpinski gasket:

Step	Picture	# Removed	Area of Each	Total removed	Total left
Start		0	0	0	1
Step 1		1	$1/4$	$1/4$	$3/4$
Step 2		3	$1/16$	$3/16$	$9/16$
Step 3		9			
Step 4					
Step N					

After infinitely many steps, what is the remaining area?

Solve exercise #19 and 22 on page 464 to explore the perimeter of the Sierpinski gasket:

Step	Picture	# Removed	Length of Line	Total new length	Total length
Start		0	0	0	3
Step 1		1	1/2	3/2	9/2
Step 2		3	1/4	9/4	27/4
Step 3		9			
Step 4					
Step N					

After infinitely many steps, what is the total perimeter?