

Math 16C
Vogler
Sequence Problem

A "very large" piece of cardboard $\frac{1}{64}$ of an inch thick is cut in half and the halves are stacked on top of each other. This new stack is cut in half and the halves are stacked on top of each other. This process is continued. How thick is the stack after 5 cuts ? 10 cuts ? 20 cuts ? 40 cuts ?

# of cuts	thickness of stack
1	$\frac{1}{64} \cdot 2$ inches
2	$\frac{1}{64} \cdot 2^2$ inches
3	$\frac{1}{64} \cdot 2^3$ inches
4	$\frac{1}{64} \cdot 2^4$ inches
.	.
.	.
.	.
n	