

# COUNTDOWN CHALLENGE

## Exponential Growth

After watching the movie, can you complete Diane's table? Notice the similarity between exponential notation and the number of cuts.

# of cuts	# of papers	Multiplication by 2	Exponential Notation
0	1	$n_0$	$2^0$
1	2	2	$2^1$
2		$2 \times 2$	$2^2$
3		$2 \times 2 \times 2$	
4			
5			
6			

### Part 2

Now, instead of folding and cutting one paper in half, see what happens when you fold one paper into thirds and cut. Can you complete Diane's table?

# of cuts	# of papers	Multiplication by 3	Exponential Notation
0	1	$n_0$	$3^0$
1	3	3	$3^1$
2			$3^2$
3			
4			
5			
6			