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The Catalan triangle is the number triangle whose entries, denoted $c_{n,k}$, give the number of strings with n X's and k Y's, where $n, k \in \mathbb{N}$, such that no initial segment has more Y's than X's. While it is easy to show that every positive integer appears at least once on the Catalan Triangle, very little is known about which integers appear uniquely. This talk investigates the sequence of integers that appear uniquely on the Catalan Triangle (OEIS reference A275481). We present conditions that guarantee uniqueness if met. Specifically, we show that all the prime powers, except for 2, 5, 9, and 27, appear uniquely on the Catalan Triangle. Additionally, we show for $n, k, x, l \in \mathbb{N}$, $n \geq 2$, and $k, l \geq 3$, $c_{n,k} = x^l$ has no solutions. (Received September 25, 2017)