A group of $n$ people are standing in a circle, numbered consecutively clockwise from 1 to $n$. Starting with person no. 2, we remove every other person, proceeding clockwise. For example, if $n = 6$, the people are removed in the order 2, 4, 6, 3, 1, and the last person remaining is no. 5. Let $j(n)$ denote the last person remaining. Is there a simple way to determine $j(n)$ for any positive integer $n > 1$? In other words, can you find a mathematical expression for $j(n)$ or write an efficient algorithm to determine $j(n)$?

To submit your solutions for a chance to win an Amazon gift card, and to find out detailed contest rules,

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