

For every positive integer n , let $p(n)$ denote the number of ways to express n as a sum of positive integers. For instance, $p(4) = 5$ because

$$4 = 3 + 1 = 2 + 2 = 2 + 1 + 1 = 1 + 1 + 1 + 1.$$

Also define $p(0) = 1$.

Prove that $p(n) - p(n - 1)$ is the number of ways to express n as a sum of integers each of which is strictly greater than 1.