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Conway's Wizard Problem can be mathematically summarized in the following way. Given a sum s and a product p, do there exist two n-partitions of s into distinct multisets such that both multisets have the same product p? If there are, we call s sum-admissible and p product-admissible. From this context, we define the following two functions. (1) $f(s) =$ number of n values such that s is sum-admissible. (2) $g(s) =$ number of p values such that s is sum-admissible; the case $g(s) = 1$ is precisely what we need to solve Conway's problem. We derive and prove the formula for $f(s)$, and determine the value of s that gives $g(s) = 1$. We further tackle the question: What would happen if we fix p instead of s? Fixing the product as $p = m^j$, where m is a prime, we are led to study a special polynomial $f(x) = (x - m)(x - 1)^2 g(x)$ with $g(x) \in \mathbb{Z}[x]$. We subsequently prove that $p = m^j$ is product-admissible if and only if $j \geq 2m + 4$. (Received September 25, 2018)