1056-11-1047 Jonathan Sondow* (jsondow@alumni.princeton.edu), 209 West 97th Street Apt 6F, New York, NY 10025, and Kieren MacMillan (kieren@alumni.rice.edu), 49 Lessard Avenue, Toronto, Ontario M6S 1X6, Canada. The Erdos-Moser equation $1^{n}+2^{n}+\cdots+(m-1)^{n}=m^{n}$, related congruences, and primary pseudoperfect numbers.
We give simple proofs of some old and new results towards the half-century-old conjecture that the only solution of the Diophantine equation in the title is $1+2=3$. We study related congruences and supercongruences, and connect them with primary pseudoperfect numbers. (Received September 20, 2009)

