1037-11-319   **Susil Kumar Jena*** (`susil_kumar@yahoo.co.uk`), Professor, Dept. of Electronics andTelec Engg, KIIT University, Bhubaneswar, Orissa 751024, India. *A Conjecture on Integer Powers.*

Some results and a bit of analysis convince this author to frame the following conjecture that relates to the powers of integers. For any positive integer n, the n-th power of an arbitrary positive integer can be expressed in infinite number of ways as the sum or difference of (n + 1) number of other n-th powers of positive integers. When n equals 1,the conjecture is obvious. We will produce the proof of the conjecture with formulae to establish the cases for n taking values 2, 3 and 4. The structure of these results would temp us to discover other formulae relating to higher values of n greater than 4. Possibly, the complete proof of this conjecture would open up our vision to add a new dimension to the understanding of the Diophantine problems and the related fields, known and unknown. (Received February 05, 2008)