1025-11-119   **Susil Kumar Jena*** (`susil_kumar@yahoo.co.uk`), Professor, Department of Electronics & Teleco, mmunication, KIIT Deemed University, Bhubanes, war, Orissa, Bhubaneswar, India 751024, India. *On the diophantine equation: $A^4 = B^4 + C^4 + D^4 - E^4 - F^4$*. Preliminary report.

The fourth power of any integer can always be expressed as the sum or difference of five other fourth power of integers, all different in magnitude. In the diophantine equation $A^4 = B^4 + C^4 + D^4 - E^4 - F^4$, the first few solutions for (A, B, C, D, E, F) being (1, 7, 8, 3, 2, 9), (2, 127, 64, 6, 4, 129) & (3, 79, 54, 9, 6, 83) etc. In this paper the author would like to show different algebraic solutions for this equation. The approach is elementary but promising, as the technique can be tried for the solution of other similar diophantine problems. (Received January 19, 2007)

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