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Susil K. Jena* (susil_kumar@yahoo.co.uk), Susil Kumar Jena, Jayapur Patna, Itipur, 751002
Bhubaneswar-751002, Orissa, India. *On disproving the Fermat-Catalan Conjecture.*

The December 1997 Notices of the AMS 1437 lists the ten known solutions for the diophantine equation $X^p + Y^q = Z^r$ where X, Y and Z are coprime positive integers. The powers : p, q, r are also integral and positive with two of them having values greater than or equal to 3 and the remaining one having a value equal to 2. In the present paper the author would present a formula which would generate infinitely many triples of coprime integer powers : X^4, Y^3, Z^2 such that $X^4 + Y^3 = Z^2$. The first five solutions of this equation are $(X, Y, Z) : (7, 15, 76); (97, 3135, 175784); (1351, 608399, 474554340); (18817, 118026495, 1282239885136); (262087, 22896531855, 3464611614776444)$ where X, Y, Z are coprimes. This infinitude of triples disproves the Fermat-Catalan Conjecture which suggests the finitude limit on the number of such triples. (Received September 16, 2000)