1035-11-378   **Susil Kumar Jena*** (`susil_kumar@yahoo.co.uk`), Professor, Dept. of Elect. and Telecom. Engg., KIIT University, Bhubaneswar, Orissa 751024, India. *On Solving the Diophantine Equation* $x^3 + y^3 + z^3 = n$.

There are many unsolved problems in number theory requiring new tools and techniques for their solutions.Consider the diophantine equation $x^3 + y^3 + z^3 = n$, where n is a fixed positive integer and x,y and z are integers, positive or negative.Though a couple of research papers are available in the literature, most of them are of computational nature requiring computer searches to find solutions to the problem for some fixed values of n.In this paper, we will give infinitely many values of n for which the title equation will have infinitely many integral solutions for (x, y, z) with x,y and z pairwise coprime.The technique involved may help us to develop new insight for attacking this unsolved problem for a possible general solution. (Received September 05, 2007)

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