

RATIONAL SOLUTIONS OF CERTAIN DIOPHANTINE EQUATIONS

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Abstract

By using a method due to Swinnerton-Dyer, rational solutions of the Diophantine equations $x^3 + y^3 + z^3 + r^3 = u^3 + v^3 + t^3 + s^3$, $x^3 + y^3 + z^3 + r^3 + o^3 + q^3 = u^3 + v^3 + t^3 + s^3 + n^3 + p^3$, $x^4 + y^4 + z^4 + r^4 = u^4 + v^4 + t^4 + s^4$ and $x^4 + y^4 + z^4 + r^4 + o^4 + q^4 = u^4 + v^4 + t^4 + s^4 + n^4 + p^4$ are obtained.

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