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(zhang5y@cmich.edu), Depatment of Mathematics, Central Michigan University, Mount Pleasant, MI 48859. Diophantine triples and quadruples.
In this paper, we give the sufficient and necessary conditions, given integers $a, b$ and $c$, that there exists integers $n, \alpha, \beta, \gamma$ such that $a b+n=\alpha^{2}, a c+n=\beta^{2}$ and $b c+n=\gamma^{2}$. The triple ( $a, b, c$ ) having this property is called a Diophantine triple with property $D(n)$. Similarly, this definition can be extended for the quadruple ( $a, b, c, d$ ). We will also discuss the existence of some special Diophantine triples and quadruples. (Received September 12, 2011)

