

SEQUENCES OF DIOPHANTINE TRIPLES

M. A. Gopalan and V. Geetha

Abstract

This paper concerns with the study of constructing sequences of Diophantine triples (a, b, c) such that the product of any two elements of the set added by a polynomial with integer coefficient is a perfect square.

Keywords and phrases: diophantine triples, integer coefficients.

Received July 18, 2015

References

- [1] I. G. Bashmakova, ed., Diophantus of Alexandria, Arithmetics and the Book of Polygonal Numbers, Nauka, Moscow, 1974.
- [2] A. F. Beardon and M. N. Deshpande, Diophantine triples, Math. Gazette 86 (2002), 258-260.
- [3] Bo He and A. Togbe, On the family of Diophantine triples $\{k+1, 4k, 9k+3\}$, Period. Math. Hungar. 58 (2009), 59-70.
- [4] Bo He and A. Togbe, On the family of Diophantine triples $\{k+1, A^2k+2A, (A+1)^2k+2(A+1)\}$ with two parameters, Acta Math. Hungar. 124 (2009), 99-113.
- [5] Bo He and A. Togbe, On the family of Diophantine triples $\{k, A^2k+2A, (A+1)^2k+2(A+1)\}$ with two parameters, Period Math. Hungar. 64(1) (2012), 1-10.
- [6] Y. Bugeaud, A. Dujella and M. Mignotte, On the family of Diophantine triples $\{k-1, k+1, 16k^3-4k\}$, Glasgow Math. J. 49(2) (2007), 333-334.
- [7] M. N. Deshpande and E. Brown, Diophantine triples and the Pell sequence, Fibonacci Quart. 39 (2001), 242-249.
- [8] M. N. Deshpande, One interesting family of Diophantine triples, Internat. J. Math. Ed. Sci. Tech. 33 (2002), 253-256.
- [9] M. N. Deshpande, Families of Diophantine triplets, Bull. Marathwada Math. Soc. 4 (2003), 19-21.

- [10] A. Dujella and C. Fuchs, Complete solution of the polynomial version of a problem of Diophantus, *J. Number Theo.* 106 (2004), 326-344.
- [11] A. Dujella and F. Luca, On a problem of Diophantus with polynomials, *Rocky Mountain J. Math.* 37(1) (2007), 131-157.
- [12] A. Dujella and V. Petricevic, Strong Diophantine triples, *Experiment. Math.* 17 (2008), 83-89.
- [13] A. Filipin, Bo He and A. Togbe, On the $D(4)$ -triple $\{F_{2k}, F_{2k+6}, 4F_{2k+4}\}$, *Fibonacci. Quart.* 48 (2012), 219-227.
- [14] A. Filipin, Bo He and A. Togbe, On the family of two parameters $D(4)$ -triples, *Glas. Mat. Ser. III* 47 (2012), 31-51.
- [15] A. Filipin, Non-extendability of $D(-1)$ triples of the form $\{1, 10, c\}$, *Internat. J. Math. Sci.* 35 (2005), 2217-2226.
- [16] M. A. Gopalan and G. Srividhya, Two special Diophantine triples diophantus, *J. Math.* 1(1) (2012), 23-27.
- [17] M. A. Gopalan, V. Sangeetha and Manju Somanath, Construction of the Diophantine Triple involving polygonal numbers, *Sch. J. Eng. Tech.* 2(1) (2014), 19-22.
- [18] M. A. Gopalan, S. Vidhyalakshmi and S. Mallika, Special family of Diophantine Triples, *Sch. J. Eng. Tech.* 2(2A) (2014), 197-199.
- [19] V. Pandichelvi, Construction of the Diophantine triple involving polygonal numbers, *Impact J. Sci. Tech.* 5(1) (2011), 7-11.