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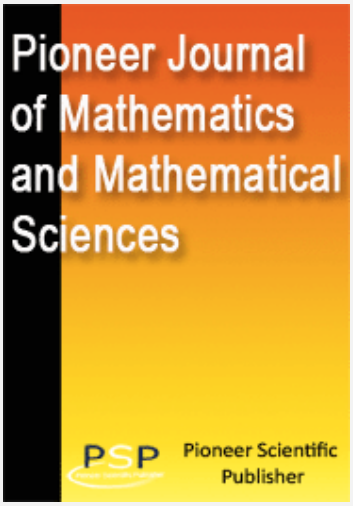

ON THE HOMOGENEOUS CONE $z^2 + 2(k+1)y^2 = (k+1)(k+3)x^2$

Özen Özer and M. A. Gopalan

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Abstract

In this paper, different sets of non-zero distinct integer solutions to the homogeneous cone given by $z^2 + 2(k+1)y^2 = (k+1)(k+3)x^2$ are obtained. Also, three different formulas for generating integer solutions to the considered cone based on its given solution are exhibited.

Keywords and phrases: homogeneous cone, ternary quadratic, integer solutions.