On Finding Integer Solutions to Non-homogeneous Ternary Cubic Equation

$$(x^2 + y^2) - xy - k(x + y) + k^2 = z^3$$

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Abstract: *This paper concerns with the problem of obtaining non-zero distinct integer solutions to the non-homogeneous ternary cubic equation* $(x^2 + y^2) - x\,y - k(x + y) + k^2 = z^3$. *Different sets of integer solutions are illustrated.*

Keywords: Non-Homogeneous Cubic, Ternary Cubic, Integer Solutions

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