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ON THE NON-HOMOGENEOUS BI-QUADRATIC EQUATION WITH FOUR UNKNOWNS $8XY + 5Z^2=5W^4$

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ABSTRACT

This paper concerns with the problem of determining non-trivial integral solutions of the non-homogeneous bi-quadratic equation with four unknowns given by $8xy + 5z^2 = 5w^4$ *.We obtain infinitely many non-zero integer solutions of the equation by introducing the linear transformations* $x = u + v, y = u - v, z = v$.

KEYWORDS: *Bi-Quadratic Equation with Four Unknowns, Integral Solutions, Non Homogeneous bi-Quadratic, Linear Transformations*

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