

TERNARY QUADRATIC FORMS, AND SUMS OF THREE SQUARES WITH RESTRICTED VARIABLES

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ABSTRACT. This is largely a survey on the representation of integers by positive, integral, ternary quadratic forms. Uniform asymptotic formulas for the number of representations are given which improve earlier results of this kind. Applications include Gauß-type three square theorems with almost-prime, squarefree, or smooth numbers.

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2000 *Mathematics Subject Classification.* 11E25, 11F37, 11P05, 11N37.

Key words and phrases. ternary quadratic forms, sums of three squares, modular forms of weight $3/2$, theta series, subconvexity, almost primes, smooth numbers, squarefree numbers, squareful numbers.

The author was supported by NSERC grant 311664-05.