1056-11-1819   **Paul R Bialek*** (`pbialek@tiu.edu`), Department of Mathematics, Trinity International University, 2065 Half Day Rd, Deerfield, IL 60015, and **Dominic W Klyve**. *Euler's work on the prime divisors of numbers of the form $mx^2 + ny^2$.*

It is well known that if a positive integer n can be expressed as the sum of two squares $x^2 + y^2$, then in the prime factorization of n no prime congruent to 3 modulo 4 has an odd exponent. In his paper, "On divisors of numbers contained in the form mxx + nyy" [E744], Euler considers the more general question of which numbers can be expressed in the form $mx^2 + ny^2$. More precisely, he determines what congruence classes modulo $4mn$ the divisors must belong to, and presents several examples. We will present a translation from the Latin and summary of this previously untranslated paper. (Received September 22, 2009)