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**Elena C Covill\*** (ec20covi@siena.edu). *On the subgroup generated by solutions of Pell's equation.*

Equivalence classes of solutions of the Diophantine equation  $a^2 + mb^2 = c^2$  form an infinitely generated abelian group  $G_m$  under the operation induced by complex multiplication, where  $m$  is a fixed square-free positive integer. Solutions of Pell's equation  $x^2 - my^2 = 1$  generate a subgroup  $P_m$  of  $G_m$ . We prove that  $G_m/P_m$  has infinite rank for infinitely many values of  $m$ . (Received September 12, 2016)