

1135-VS-221

**Richard F. Ryan\*** (rryan@marymountcalifornia.edu), 30800 Palos Verdes Drive East, Rancho Palos Verdes, CA 90275. *A Generalized Fermat Equation with an Emphasis on Non-Primitive Solutions.*

The equation  $x^m + y^n = z^r$  is considered under the condition that the given integers values for  $m$ ,  $n$ , and  $r$  are greater than one. Solutions of this equation are given for cases in which  $\gcd(mn, r) = 1$ ,  $\gcd(mr, n) = 1$ , or  $\gcd(nr, m) = 1$ . (Received August 12, 2017)