

Year: 2013

Vol.: 82

Fasc.: 2

Title: On the Diophantine equation $cy^l = \frac{x^p-1}{x-1}$

Author(s): Mohammad Sadek

Let p, c be distinct odd primes, and $l \geq 2$ an integer. We find sufficient conditions for the Diophantine equation

$$cy^l = \Phi_p(x) = \frac{x^p-1}{x-1} = x^{p-1} + x^{p-2} + \dots + 1$$

not to have integer solutions.

Address:

Mohammad Sadek
Department of Mathematics
and Actuarial Sciences
American University in Cairo