International J. of Math. Sci. & Engg. Appls. (IJMSEA) ISSN 0973-9424, Vol. 6 No. II (March, 2012), pp. 245-252

equation.

## ON REP-DIGIT POLYGONAL NUMBERS

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## Abstract

This paper investigates on the properties of integers that are simultaneously represented as both m rep-digit  $(dR_m)$  and n-gonal numbers. Using hyperbolic geometry, we ascertain both lower and upper bounds on these numbers when there are a finite set these integers.

Key Words: Rep-digit, Rep-unit, Polygonal number, Simultaneous rep-digit polygonal, Pell

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