

Public Abstract

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Graduation Term:FS 2010

Department:Mathematics

Degree:PhD

Title:On the Theory of Integer Sequences

We explore certain sequences of integers which appear in the number theory. We start by exploring properties of Beatty sequences. We concentrate on looking at the sum of primes from a Beatty sequence and properties of certain multiplicative functions on a Beatty sequence. We move on to the Robin and Nicolas inequalities and consider sequences with certain properties which must satisfy these. Next is we explore certain sequences of composite integers which are similar to those of the primes, mainly Carmichael, Guiga, and Lucas numbers. Finally we discuss Descartes numbers, and determine all such numbers with certain other properties.