

## Valuations of Sequences: Searching for Exact Formulas

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Given a positive integer  $a$  and a prime  $p$ , the  $p$ -adic valuation of  $a$  is the highest power of  $p$  dividing  $a$ . This talk considers the  $p$ -adic valuation of a given sequence. We are interested in explicit formulas describing them. For example, a classical formula of Legendre states that the  $p$ -adic valuation of the sequence of factorials is given in terms of the digits of  $n$  when written in base  $p$ . Theorems, conjectures, trees and pictures will be discussed.

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