

## Arithmetic Properties of the Sum of Divisors

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Given a prime  $p$ , the  $p$ -adic valuation of a number  $x$  is defined as the highest power of  $p$  that divides  $x$ . In this talk we will discuss the  $p$ -adic valuation of  $\sigma(n)$ , the sum of divisors of an integer  $n$ . We will present an explicit formula and some bounds will be discussed. This is joint work with Tewodros Amdeberhan, Victor Moll and Vaishavi Sharma.