MATHEMATICS DEPARTMENT SEMINAR

An Eulerian Recursion for the Sum of Divisors Function



Dr. David Gove



California State University Bakersfield





Wednesday, October 29, 2025



Abstract

In number theory, the sigma function maps positive integers to the sum of their divisors. The function and several of its properties are included in most elementary number theory courses (including all the ones I've taught at CSUB), especially as it relates to perfect numbers. It would seem to be quite well understood already. However, in this talk, I will demonstrate and prove a property of the function that was discovered, but not proved, by Euler.