Size doesn’t matter: heights in number theory

Abstract:
How complicated is a rational number? Its size is not a very good indicator for this. For instance, 1987985792837/1987985792836 is approximately 1, but so much more complicated than 1. We’ll explain how to measure the complexity of a rational number using various notions of height. We’ll then see how heights are used to prove some basic finiteness theorems in number theory.