

1165-11-105

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Vojta's conjecture and arithmetic dynamics.

I will discuss applications of Vojta's conjecture to some problems in arithmetic dynamics, concerning the growth of sizes of coordinates of orbits, greatest common divisors among coordinates, and prime factors of coordinates. These problems can be restated and generalized in terms of (local/global) height functions, and I proved estimates on asymptotic behavior of height functions along orbits assuming Vojta's conjecture. As corollaries, I showed that Vojta's conjecture implies Dynamical Lang-Siegel conjecture for projective spaces (the sizes of coordinates grow in the same speed), and existence of primitive prime divisors in higher dimensional setting. (Received January 14, 2021)