

Consider the function  $A285175(n)$  which is the lexicographically earliest sequence of positive integers such that no  $k + 2$  points are on a polynomial of degree  $k$ . (i.e. no two points are equal, no three points are colinear, no four points are on a parabola, etc.)

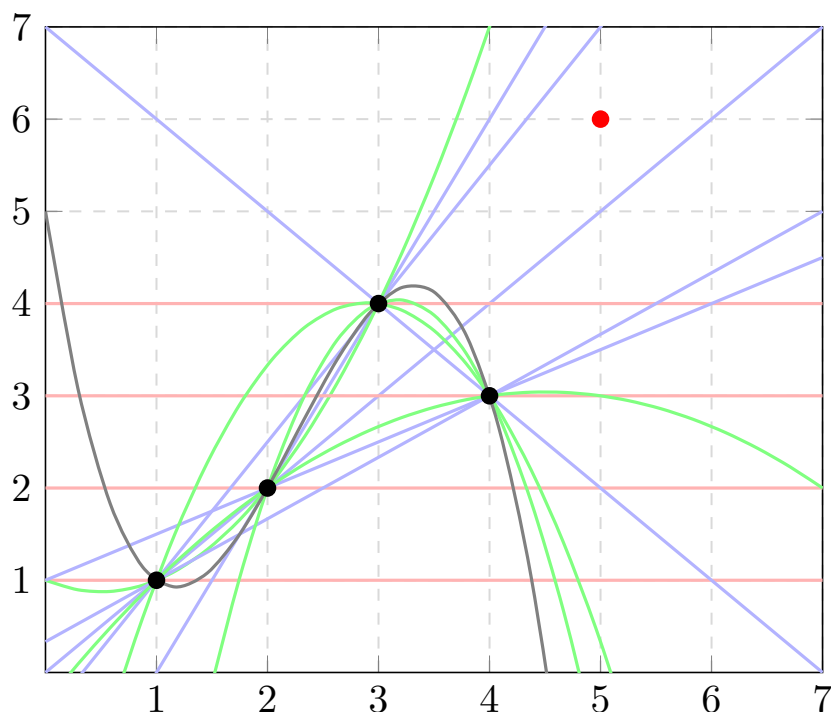


Figure 1: The first four points together with all interpolated polynomials. The red point marks the lowest integer coordinate  $(5, k)$  that does not lie on an interpolated polynomial. (Degree 0 polynomials are plotted in red, degree 1 in blue, degree 2 in green and degree 3 in gray.)

**Question.** Do all positive integers occur in this sequence?

**Related.**

1. What is the asymptotic growth of this sequence?