www.artofproblemsolving.com/community/c103173

by randomusername

1	Is there an infinite sequence of positive integers where no two terms are relatively prime, no term divides any other term, and there is no integer larger than 1 that divides every term of the sequence?
2	Prove that for every positive integer n, there exists a polynomial with integer coefficients whose values at points $1, 2, \ldots, n$ are pairwise different powers of 2.
3	For which integers $N \geq 3$ can we find N points on the plane such that no three are collinear, and for any triangle formed by three vertices of the points' convex hull, there is exactly one point within that triangle?