Problem 1 (due Monday, February 9)

For which polynomials $f(x)$ the limit \[\lim_{x\to \infty}\left(\sqrt[1013]{f(x+2)}-2\sqrt[1013]{f(x+1)}+\sqrt[1013]{f(x)}\right)\] is finite and non-zero?

We received no solutions. The answer to the problem is that the limit is finite and non-zero if and only if the degree of f is equal to 2026. For a detailed solution see the following link Solution.