Abstract of paper [1].

We study the distribution of the values of the form $\lambda_1 p_1 + \lambda_2 p_2 + \lambda_3 p_3^k$, where λ_1, λ_2 and λ_3 are non-zero real numbers not all of the same sign, with λ_1/λ_2 irrational, and p_1, p_2 and p_3 are prime numbers. We prove that, when $1 < k \leq 3$, these value approximate rather closely any prescribed real number.

References

[1] A. Gambini, A. Languasco, and A. Zaccagnini. A Diophantine approximation problem with two primes and one *k*-th power of a prime. *J. Number Theory*, 188:210–228, 2018.