The authors of this interesting paper consider three types of diophantine problems, having common roots of proofs. First they prove that there exist distinct positive integers $a_1, ..., a_k, b_1, ..., b_\ell$ such that the greatest prime factor of $\prod_{i=1}^{k} \prod_{j=1}^{\ell} (a_i + b_j)$ is small, so that the lower estimate of *K. Györy, C. L. Stewart* and *R. Tijdeman* [Compos. Math. 59, 81-88 (1986; Zbl 602.10031)] is not far from being best possible. Secondly, the number of coprime solutions of S-unit equations $x + y = z$ is examined, where x, y, z are composed of a fixed finite set of primes. Thirdly, the number of solutions of Thue-Mahler equations is studied. It is shown, that the last two problems may have surprisingly many solutions in contrast with the upper bounds of *J. H. Evertse* [Invent. Math. 75, 561-584 (1984; Zbl 521.10015)].

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Classification:
11D41 Higher degree diophantine equations
11D57 Multiplicative and norm form diophantine equations
11D75 Diophantine inequalities

Keywords:
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