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Linear independence of dilogarithmic values. (English) Zbl 1454.11131

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Summary: We establish the linear independence over \mathbb{Q} , in both qualitative and quantitative forms, of the four numbers 1 , $\text{Li}_1(1/z) = -\log(1 - 1/z)$, $\text{Li}_2(1/z)$ and $\text{Li}_2(1/(1 - z))$, for all integers $z \geq 9$ or $z \geq 8$ and for rationals $z = s/r$ or $z = 1 - s/r$ with $1 < r < s$, where s is large in comparison with r .

MSC:

[11J72](#) Irrationality; linear independence over a field

[11J82](#) Measures of irrationality and of transcendence

Cited in **2** Documents

Keywords:

dilogarithmic values; Padé-type approximation; saddle point method

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