

**Zudilin, V. V.**

**One of the numbers  $\zeta(5)$ ,  $\zeta(7)$ ,  $\zeta(9)$ ,  $\zeta(11)$  is irrational.** (English. Russian original) [Zbl 1047.11072](#)  
Russ. Math. Surv. 56, No. 4, 774-776 (2001); translation from Usp. Mat. Nauk 56, No. 4, 149-150 (2001).

The author sketches a proof of the important result stated in the title: his method is based on a subtle refinement of the hypergeometric technique used by the reviewer to prove the weaker result that one of the nine numbers  $\zeta(5)$ ,  $\zeta(7)$ , ...,  $\zeta(21)$  is irrational. A related preprint “Arithmetic of linear forms in odd zeta values” of the author contains all the necessary explanations and will appear in J. Théor. Nombres Bordx.

Reviewer: [Tanguy Rivoal \(Caen\)](#)

**MSC:**

[11J72](#) Irrationality; linear independence over a field  
[11M06](#)  $\zeta(s)$  and  $L(s, \chi)$

Cited in **1** Review  
Cited in **25** Documents

**Keywords:**

[Riemann zeta-function](#); [irrationality](#)

**Full Text:** [DOI](#)