

[Myasnikov, Alexei D.](#); [Myasnikov, Alexei G.](#); [Shpilrain, Vladimir](#)

On the Andrews-Curtis equivalence. (English) [Zbl 1010.20019](#)

Cleary, Sean (ed.) et al., Combinatorial and geometric group theory. Proceedings of the AMS special session on combinatorial group theory, New York, NY, USA, November 4-5, 2000 and the AMS special session on computational group theory, Hoboken, NJ, USA, April 28-29, 2001. Providence, RI: American Mathematical Society (AMS). Contemp. Math. 296, 183-198 (2002).

The Andrews-Curtis conjecture claims that every balanced presentation of the trivial group can be reduced to the standard one by a sequence of elementary transformations (Nielsen transformations and conjugations). In the present paper it is shown, by constructing suitable chains of elementary transformations, that some of the previously proposed examples are actually not counterexamples to the conjecture. On the other hand, two methods for constructing balanced presentations of the trivial group are presented (one using exotic knot diagrams of the unknot), leading to new potential counterexamples to the conjecture.

For the entire collection see [\[Zbl 0990.00044\]](#).

Reviewer: [Bruno Zimmermann \(Trieste\)](#)

MSC:

[20F05](#) Generators, relations, and presentations of groups

[57M05](#) Fundamental group, presentations, free differential calculus

Cited in 4 Documents

Keywords:

[Andrews-Curtis conjecture](#); [presentations of the trivial group](#); [balanced presentations](#)

Full Text: [arXiv](#)