Problem #57

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Summary: Does there exist a semigroup theory for which there is a reduced canonical term-rewriting system that is not length decreasing?

Does there exist a semigroup theory (without constants in the equations) for which there is a reduced canonical term-rewriting system (with the right-hand side and subterms of the left in normal form) that is not length decreasing?

Bibliography

[Baa90] Franz Baader. Rewrite systems for varieties of semigroups. In M. Stickel, editor, *Proceedings of the Tenth International Conference on Automated Deduction (Kaiserslautern, West Germany)*, volume 449 of *Lecture Notes in Computer Science*, pages 381–395, Berlin, July 1990. Springer-Verlag.

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