



The computational complexity of recognising embeddings in finitely presented groups

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We extend a result by Lempp that recognising torsion-freeness for finitely presented groups is Π^0_2 -complete; we show that the problem of recognising embeddings of finitely presented groups is at least Π^0_2 -hard, Σ^0_2 -hard, and lies in Σ^0_3 . We conjecture that this problem is indeed Σ^0_3 -complete. We use our constructions to form a universal finitely presented torsion-free group.

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