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Title: Hidden subgroup problems in quantum computing.

Abstract: We will give a short introduction to quantum computing with a discussion of the quantum Fourier transform. We will then discuss Shor's algorithm for period search and how it relates to his famous quantum algorithm for factorization and discrete log. We will relate these results to hidden subgroup algorithms and then give a new algorithm (joint work with D. Meyer) to solve the problem for a class of non-normal maximal subgroups of $ax + b$ groups.