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*Computational Hamiltonianism*

Several sophisticated algorithms (blossom for matching, integer-linear programming, traveling salesman) are now easily available. This leads to algorithms to:

1. find a minimal vertex coloring of a graph;
2. find a minimal edge coloring of a graph;
3. find a Hamiltonian decomposition for regular graphs;
4. determine if a graph is Hamilton-connected;
5. find a perfect 1-factorization for graphs.

I have applied these ideas to all 7183 graphs in *Mathematica's* database, resolving a very high percentage of them (all 7183 for problems 2, 3, and 4) regarding these five problems. Such computations lead to some intriguing conjectures.