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What is the computational complexity of deciding whether a finite algebra generates a minimal variety? What is the likelihood that a random finite lattice directly decomposes into an even number of directly indecomposable lattices? Is the algebra  $\langle \mathbb{N}, +, \cdot, \binom{n}{k}, !, 0, 1 \rangle$  finitely based? Is it decidable, given a finite lattice  $\mathbf{L}$  and a finite algebra  $\mathbf{A}$ , whether  $\mathbf{L}$  can be embedded into the congruence lattice of an algebra belonging to the variety generated by  $\mathbf{A}$ ? What is the Nullstellensatz for free lattices? Which finite automatic algebras are dualizable?

These six untried problems, as well as six well-known old open problems will be discussed. (Received November 30, 2009)