

Midterm exam 1.

Due Wed. Oct. 4 before class

Prove the following. In numbers 1, 2, and 3 use Tarski's definition of finiteness.

1. The product of two finite sets is finite.
2. The union of finitely many finite sets is finite.
3. If x, y are finite sets and y is nonempty, then the set of all functions from x to y is finite
4. Every set of natural numbers has a smallest element. (Use the axiom of foundation)
5. Same as 4, but do not use the axiom of foundation.