Homework 1

This homework is due Wednesday, Jan. 31 (in class).

(25 points) Comparing the expressiveness of different programming languages is difficult. This question concerns comparisons based on succinctness. The idea is that language A is "more succinct" than language B if programs written in language A are shorter than programs written in language B.

1. The above description is vague and contains many undefined terms. (For example, what does "shorter" mean?) Formalize the notion of "succinctness," making any refinements you think are necessary.

2. Based on your formalization of "succinctness" and your intuitions about what makes a "good" programming language, what are the pros and cons of using succinctness to judge whether one language is better than another?