Massachusetts Institute of Technology
6.042J / 18.062J, Fall '05: Mathematics for Computer Science

## In-Class Problems Week 3, Fri.

Problem 1. Given an unlimited supply of 3 cent and 5 cent stamps, what postages are possible? Prove it using Strong Induction. Hint: Try some examples! Which postage values between 1 and 25 cents can you construct from 3 cent and 5 cent stamps?

Problem 2. Use the Well-ordering Principle to prove that there is no solution over the positive integers to the equation:

$$
4 a^{3}+2 b^{3}=c^{3}
$$

