

## 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:

$$4a^3 + 2b^3 = c^3.$$