**Quiz # 1 for Dr. Z.'s Number Theory Course for Sept. 26, 2013**

**NAME:** (print!) _____

**E-MAIL ADDRESS:** (print!) _____

**1.** (3 points) Convert 51 (written in the usual decimal notation) to to binary, in (i) sparse notation (ii) dense notation (iii) positional notation.

**2.** (3 points) Find, by only using paper-and-pencil the first three terms of the Euclid-Mullin sequence.

**3.** (4 points) Prove that there are infinitely many primes.