Your Name:

Duration of the Quiz is 20 minutes. There are four problems, worth 20 points. Show all your work for full credit. Books, notes etc. are prohibited. Calculators are NOT permitted.

1. Find the expansion of $(x + y)^6$.

2. What is the coefficient of $x^{101}y^{99}$ in the expansion of $(2x - 3y)^{200}$?

3. Prove that the additive identity element 0 of the real numbers is unique.

4. Prove that for every real number x, $-(-x) = x$.