Your Name:

Duration of the Quiz is 25 minutes. There are five problems, worth 20 points, and an extra credit problem, worth 2 points. Show all your work for full credit. Books, notes etc. are prohibited.

1. How many integers between 200 and 899 have distinct digits, and how many of those are even numbers?

2. Suppose that ten people, including you and a friend, line up for a group picture. How many ways can the photographer rearrange the line if she wants to keep exactly three people between you and your friend?

3. What is the coefficient of x^{32} in the expansion of $(1 + x^2 + x^7)^{50}$?

4.	Linda is taking a five-course load her first semester: different ways can she earn three A's and two B's?	English, math, French, psychology, and history. In how many
5.	Computer passwords are to consist of a string of size letters $a,b,c,,z$. How many computer passwords	ix symbols taken from the digits $0, 1, 2,, 9$ and the lowercase have a repeated symbol?
	Extra Credit Problem (2 points) How many inte	tegers between 0 and 10,000 have only one digit equal to 5?