**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_**

**Day 05** **- Analyzing Numerical Data: Estimating Large Numbers**

I.A Student Activity Sheet 3: Not Enough Numbers

**New Jersey started running out of license plates and had to switch the way they were assigned:**

**Old System: 3 letters, 2 numbers, 1 letter New System: 1 letter, 2 numbers, 3 letters**

**6. How many license plates could New Jersey assign under the OLD system?**

**7. How many additional license plate numbers can New Jersey assign under the NEW system? (assume the 1st number can be anything other than zero).**

**8. Delaware currently uses 6 numbers on their license plates. What is the maximum number of license plates that they can issue?**

**9. Washington State is running out of numbers to use for license plates. Currently they use 3 numbers followed by 3 letters. How many options does this give?**

**10. REFLECTION: In solving real-world problems such as estimating a crowd size, how many tennis balls fit in the classroom, the number of possible telephone numbers, why is it necessary to first make some reasonable assumptions about the situation?**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_

**Ticket out the Door:**

According to the Social Security Number Verification Service since 1973 social security numbers have been assigned using the following method:

**ABC – XY – JKLM**

* The first three digits (ABC) are determined by the Zip Code of the mailing address shown on the application for the Social Security Number
* The middle two digits (XY) cannot be 00.
* The last four digits (JKLM) cannot be 0000.

In Texas, the SSN may begin with 449 – 467 or 627 – 645

1. Using this information, how many SSN’s may be assigned in Texas?

2. According to the US Census Bureau the population of Texas in 2009 was 24,782,302 people. Will we run out of social security numbers?

3. All 5 – digit zip codes in the United States are assigned by region. In Texas, all zip codes begin with the number 7 while the second digit is restricted to numbers 5 to 9. There is no restriction on the remaining digits. How many zip code combinations are possible in Texas?