

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. $10 \cdot 10 = 100 - 1$ (00 pair) = 99
- The last four digits (JKLM) cannot be 0000. $10,000 - 1 = 9999$

In Texas, the SSN may begin with 449 - 467, or 627 - 645
 $19 \text{ options} + 19 \text{ options} = 38$

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

$$\frac{38}{ABC} \cdot \frac{99}{XY} \cdot \frac{9999}{JKLM} = 37,616,238 \text{ SSN'S}$$

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?

based on the answer to #1, no.

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?

$$\frac{1}{7} \cdot \frac{5}{5-9} \cdot \frac{10}{0-9} \cdot \frac{10}{0-9} \cdot \frac{10}{0-9} = 5,000 \text{ zip codes}$$