

# CS 278 Lab 12

10.3.1 b) Digits  $\{0 - 9\}$ , Letters  $\{a - z\}$   
Special char  $\{*, \&, \$, \#\}$

String length 6 can be special char, letters, or digits, no repeated characters.

First char can't be a special char.

$$36 \times 39 \times 38 \times 37 \times 36 \times 35 =$$

$$\boxed{2487270240}$$

10.3.3 b) License plate: Digit - Letters - L - L - L - D - D

How many possible combinations if no digits appear more than once?

$$10 \times 26 \times 26 \times 26 \times 26 \times 9 \times 8 =$$

$$\boxed{329022720}$$

c) How many possible if no digit or letter occurs more than once

$$10 \times 26 \times 25 \times 24 \times 23 \times 9 \times 8 =$$

$$\boxed{258336000}$$

10.4.3 b) Ten members of a club line up in a row

for a picture. It has a president, VP, secretary, treasurer.

How many ways to line them up if president is next to the VP?  $2 \cdot 9! =$

$$\boxed{725760}$$