Assignment 3

**Exercise 3.2**

**Key:**

1. ?
   1. Means 0 or 1 occurrence
2. \*
   1. Means 0 or many occurrence
3. +
   1. Means 1 or many occurrence
4. {n,m} – Ask the Prof. if we can use this
   1. This is called a quantifier
   2. This means **at least n and at most m occurrences** (range quantifier).
   3. Example: [0-9]{1,3} matches **1 to 3 digits**.

Answer:

0 | [1-9] | [0-9]?[0-9]? ('[0-9] [0-9] [0-9])\*  
or   
 0 | [1-9]{0,2} ([0-9]{3})\*

**Exercise 3.2**

**Rules:**

1. Regular expressions

L a = {w ∈ {0,1}\* | |w| is odd}  
  
(0|1)(00|11|01|10)\*  
(0|1)(())