Name _____ Period _____

Number Systems

Your Tasks (Mark these off as you go)

- ☐ Brainstorm: How many ways can we represent 7
- ☐ Investigate 3 place patterns
- ☐ Organize your patterns in a predictable sequence
- ☐ Explain your number system
- ☐ Test your number system
- ☐ Receive credit for this lab guide

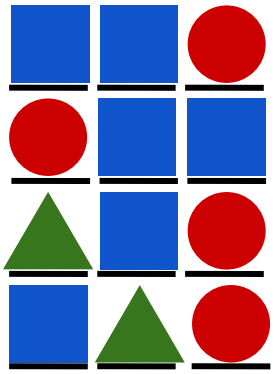
☐ Brainstorm: How many ways can we represent 7

Think about the different ways you can represent the number 7. Write your ideas below

☐ Investigate 3 place patterns

Given 3 places to work with, make as many *unique* patterns as you can using only circles, triangles and squares. Arrange your patterns in the table below by copying (ctrl-c) and pasting (ctrl-v) the images provided. You can also type SCT to represent a square, circle, triangle, respectively.

The diagram on the right shows a few examples of some 3-place patterns. *NOTE: Order matters, so, for example: Circle-Triangle-Square is a different pattern than Square-Circle-Triangle, even though both have one of each shape.*



 (SCT)		

How many 3 place patterns did you find?

☐ Organize your patterns in a predictable sequence

Once you have found as many patterns as possible, figure out a way to order your patterns so that the sequence is predictable. In other words, how might you use circles, squares, and triangles to count.

Record the first 10 patterns of your sequence below by copying (ctrl-c) and pasting (ctrl-v) the shapes provided. Or typing combinations of SCT to represent square, circle, triangle, respectively.

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

☐ Explain your number system

In the space below explain your number system and how you could use it to count. Your explanation should be thorough and written in a narrative format using complete sentences, correct spelling, and proper grammar.

☐ Test your number system

Indicate how your number system could be used to represent the following quantities.

30	
41	
100	
200	
1028	

☐ Receive Credit for this lab guide

Submit this portion of the lab to Pluska to receive credit for the lab guide.