

Q2 a)

The function reads the input in base-62, using the english alphabet (both uppercase and lowercase) and 10 digits as the 62 symbols. The order of the symbols from lowest to highest are as follows:

C7xicPMGvzAZyTNodmwnV5D3B6H0Oup8E21W9sqLQX4YjSeUhIRJgafFtrKlbk

Where 'C' is equal to zero and 'k' is sixty-one.

Reading the input in base-62 and using the symbol order shown above results in the output.

Q2 b)

30001 -> GIF

55555 -> NOi

77788 -> VNQ

Q2 c)

If the output is assumed to be limited to 3 characters, then the largest input would result in the output "kkk" - or an input of '238327'.

However, if the output is NOT limited to 3 characters, then there would be no such limit on the input, and the next output in the series would simply be "7CCC" and continue to grow normally as the input grows.

Q2 d)

All of my work was done in the following spreadsheet:

<https://docs.google.com/spreadsheets/d/1JvUzWzZQTWvP44j50JxOQjjU2PLRBfNof531YlvLRx8/edit?usp=sharing>