Given a string of numbers and a function f,and the domain of the function is formed by putting the numbers of all the subsets next to each other.
For example,for the string x={1,4,6}
f(1),f(4),f(6),f(14),f(16),f(46)

If the numbers get to match,as in this example: 4,6,46 will generate:
f(4),f(6),f(46),f(46),f(446),f(646)
46 is found twice.This can easily be solved by adding restrictions,such as modifying the duplicate into 46111111.....(1 is the of the order it was found,if 46 was the first duplicate found,then it would be 1)
and the number of 1 would make it with 1 decimal longer than any other number in the string,so it's sure there's none equal to it.

For each number x,there will be randombly generated a number y with the property f(x)=y,making it a multiple branch function.
For example:
f={
2,x=1
4,x=2
7,x=3
9,x=4}
the numbers 2,4,7,9 being randomly generated numbers.

Also,it is known that the function f is bijective.

The question is,choosing a number y from the codomain,what is the number x in the string so f(x)=y?

Undoubtly,the only method to find out is to check,to apply the function to every single number formed by combining the numbers in every subset.

By adding a number to the string,there will be created more numbers in the codomain,and another function with the same properties as the previous one,but will contain new numbers and will generate more numbers y with the property f(x)=y.
So,as you add another number to the string,it grows exponentially,and the time to verify if f(x)=y is polynomial.

Sorry for any mistakes,I'm an amateur.