

# Google Code Jam solved

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# Preface

asjdlasdnlksadllkasn  
asdnjsanld



PART

1

THEORY





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## CHAPTER 1

# DATA STRUCTURES

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Fairy tales are more than true:  
not because they tell us that  
dragons exist, but because they  
tell us dragons can be beaten.  
C.K. CHESTERTON

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LA MIA LIBRA

### Definition 1: Titolo

to definendo cose

### Theorem 1: Mioteorema

ajkdfna

## 1.1 First algorithms

### 1.1.1 asndjkasn



## PART

### 2

## CODE JAM 2019

### 1.2 Qualification round

#### 1.2.1 Foregone solution

##### Problem 1

Suppose you have an integer  $N$ . Split  $N$  in two integers  $A$  and  $B$  such that  $N = A + B$ , in such a way that 4 is not contained nor in  $A$  nor in  $B$ . If there is not a 4 in the integer  $N$ , then  $A$  or  $B$  can be 0.

**Trick:**  $N = N + 0$ , remove unity from 4's in  $N$  and add them in the right place in the vector of 0's.

```
function solution(n::Int)
    #Solution with power
    n_string = string(n)
    N = length(n_string)
    B = 0
    for i = 1:N
        if n_string[N-i+1] == '4'
            n = n - 2*10^(i-1)
            B = B + 2*10^(i-1)
        end
    end
    return n,B
end

function solution(n::Int)
    #Solution with joininig
    n_string = string(n)
    x = zeros{Int,0}
    for i = 1:length(n_string)
        if n_string[i] == '4'
            append!(x,1)
        else
            append!(x,0)
        end
    end
end
```

```
        end

        B = parse(Int, join(x))
        A = n - B
        return A, B
    end

T = parse(Int, readline())
for i = 1:T
    n = parse(Int, readline())
    a, b = solution(n)
    println("Case #\$i: \$a \$b")
end
```