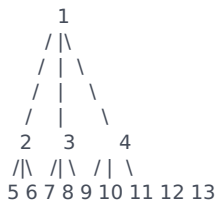# Pineapple Pack

Kenny is in the market for a new pineapple adorned backpack. He goes to the store and decides he wants the backpack with the most pineapples. You know which backpack has the most pineapples but must give Kenny directions to get there. The backpacks are laid out in aisles. Each aisle has a single backpack on it, and splits into three more aisles (it's not a very efficient store). The backpacks are numbered from $1$ to $\infty$. The first aisle has backpack $1$. If you turn left you get to backpack $2$. If you had gone down the middle, you would have gotten to backpack $3$, and if you turned right you would have gotten to backpack $4$. The store looks something like this (but it is an infinite store, of course).

```
      1
     /|\
    / | \
   /  |  \
  /   |   \
 2    3     4
/|\  /|\  /| \
5 6 7 8 9 10 11 12 13
```

Given a backpack number, give Kenny the directions to get there from the first aisle in terms of  L  for left,  M  for middle and  R  for right.

Solutions are guranteed in: Python 3 with more to come...

**Input Format**

$N$

The index of a backpack in the store to give directions to.

**Constraints**

$0 < N < 2^{63} - 1$

$N$ is 1 indexed, **NOT** 0 indexed.

**Output Format**

A series of capital characters either  L ,  M , or  R  that are the steps, in order, to the correct backpack. No spaces.

**Sample Input 0**

```
12
```

**Sample Output 0**

```
RM
```

**Sample Input 1**

```
33
```

**Sample Output 1**

```
RLM
```