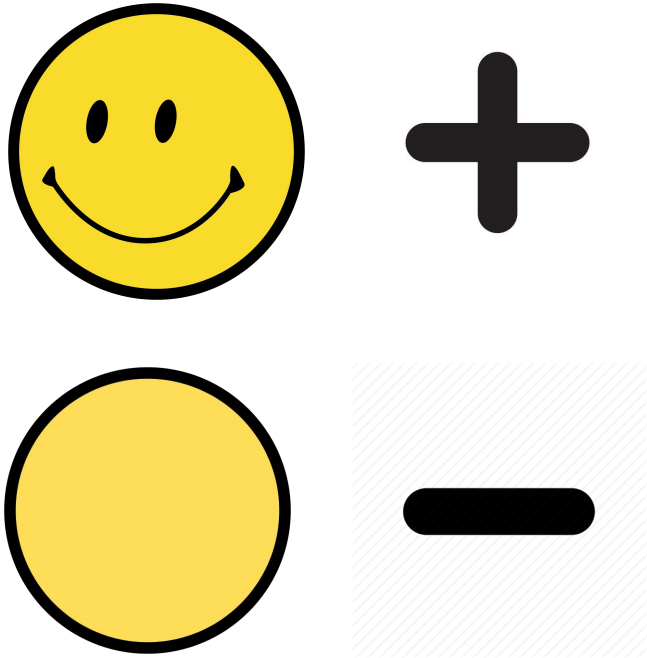
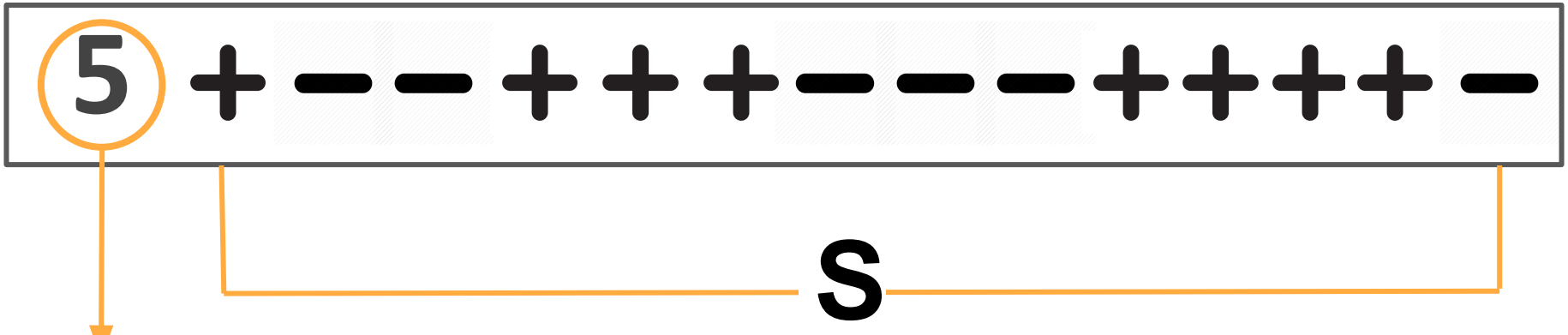
# Oversized Pancake Flipper

We can do this ladies !

# Infinite House of Pancakes



# Structure of a line of input:




**K**

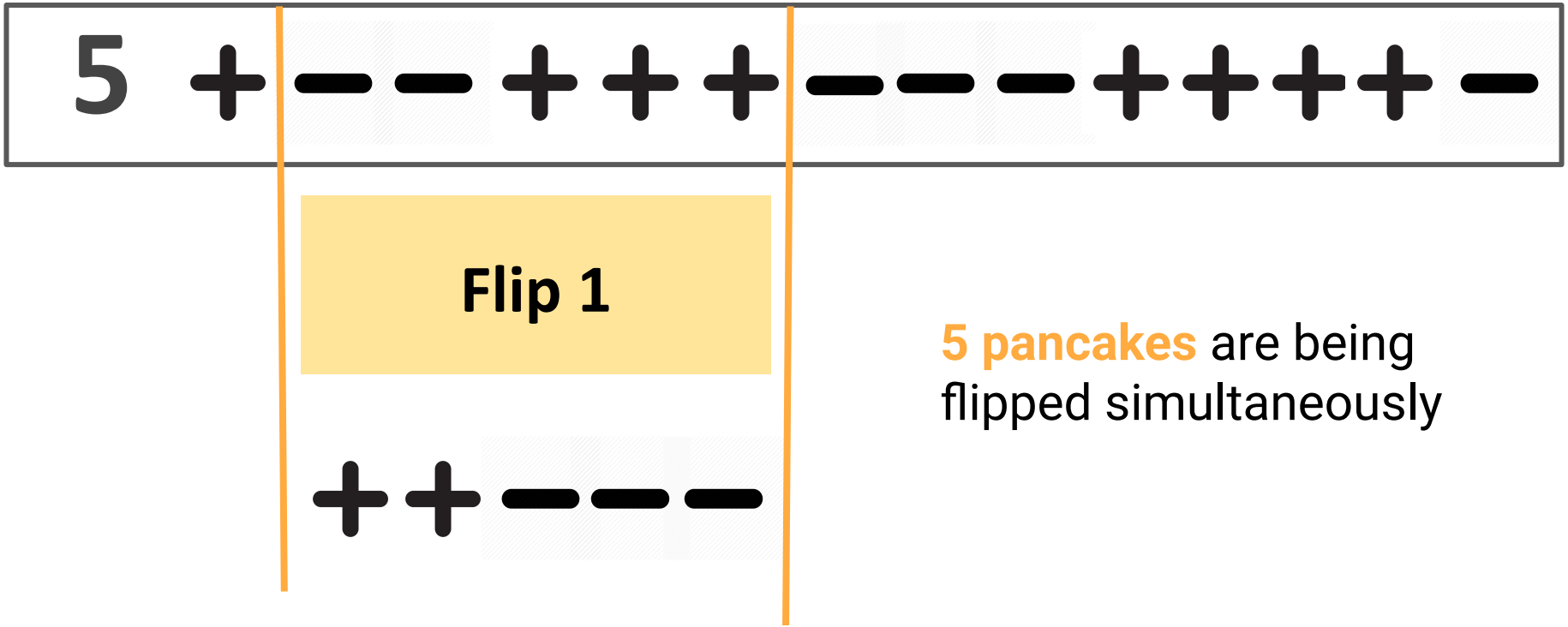
Flipper Size

**Small Dataset:** 2 ≤ length of **S** ≤ 10

**Large Dataset:** 2 ≤ length of **S** ≤ 1000

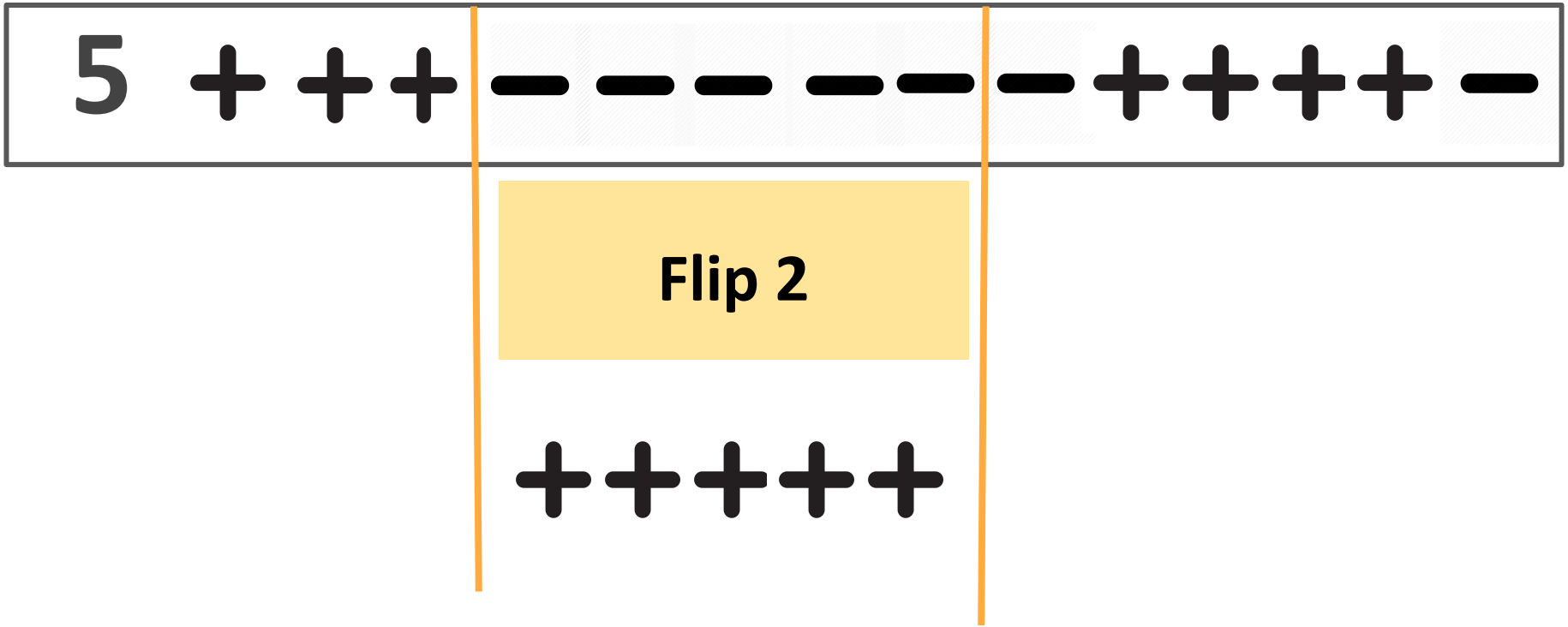
2 ≤ **K** ≤ length of **S**

# Results of flip 1:

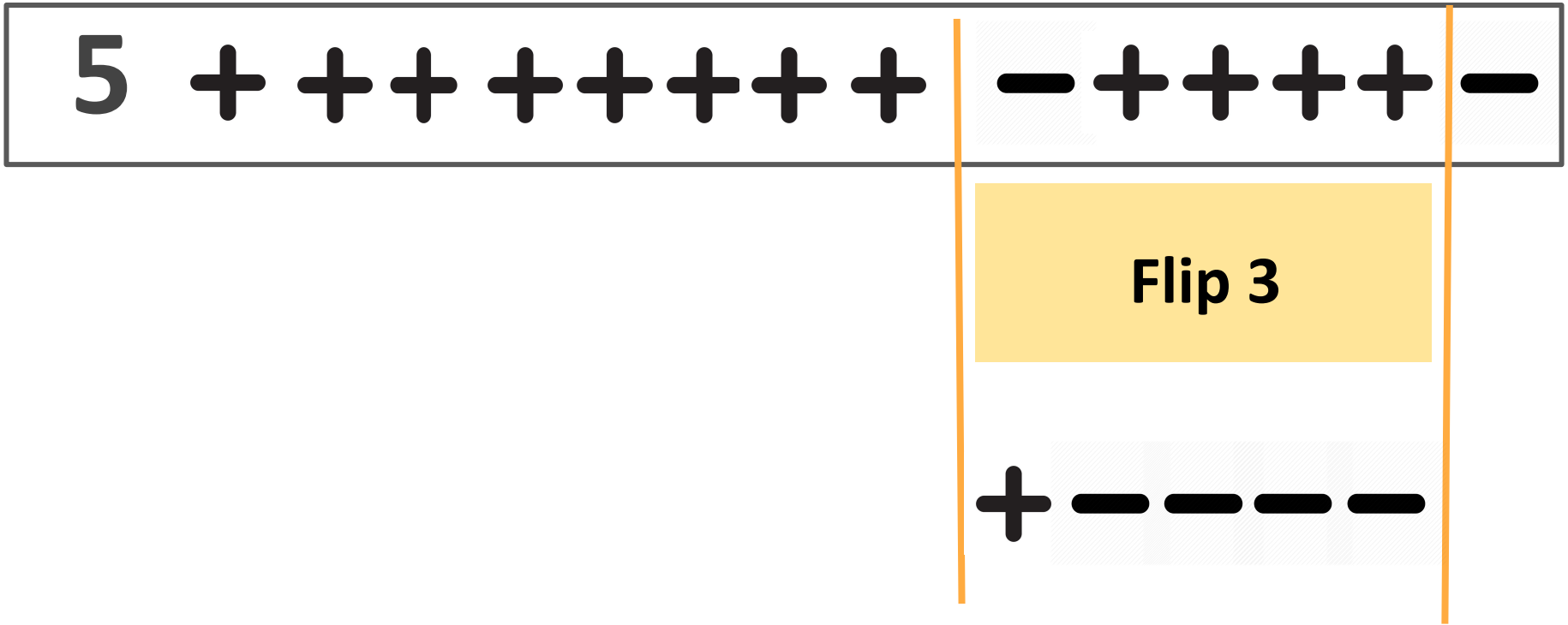



**5 pancakes** are being flipped simultaneously

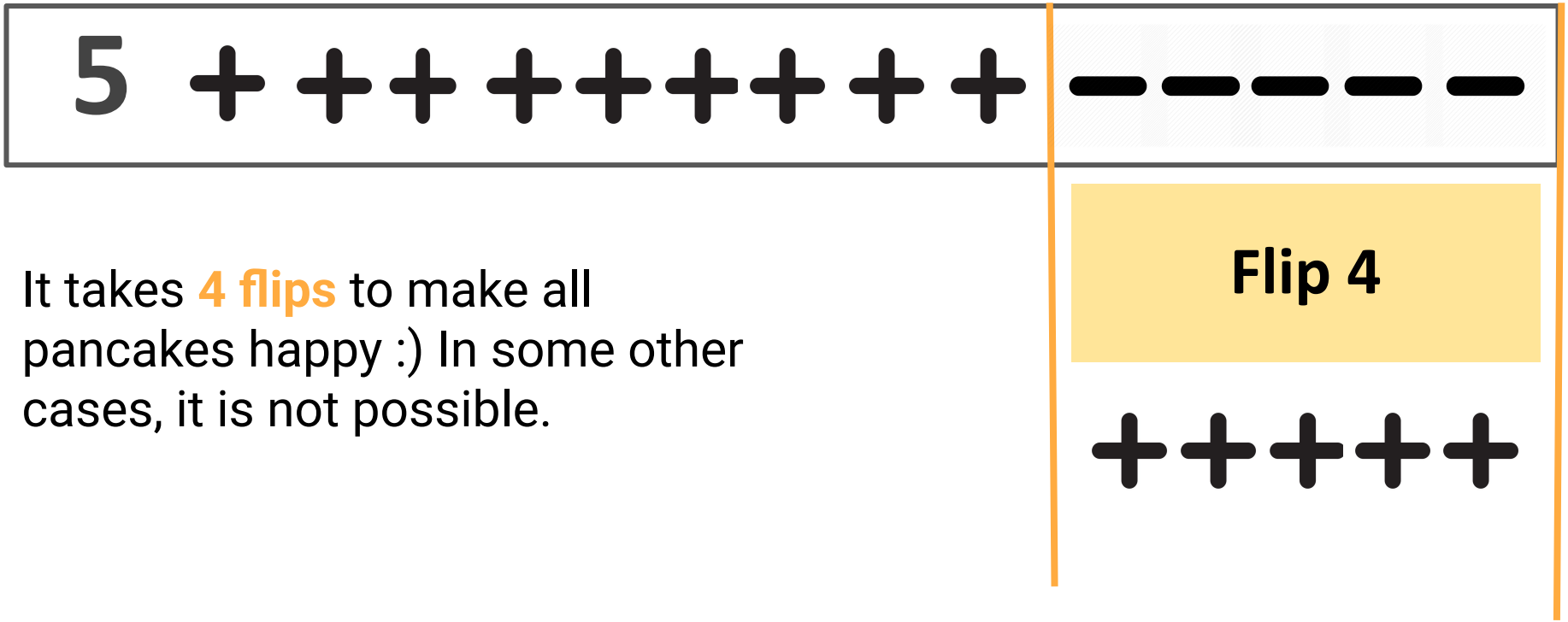
# Results of flip 2:



# Results of flip 3:



# Results of flip 4:




It takes **4 flips** to make all pancakes happy :) In some other cases, it is not possible.

# Text File Input:

```
100
---+-++- 3
+++++ 4
-+-+- 4
+++ 3
-+++- 3
++--+-+-- 3
++++ 3
```

The first number is the number of test cases.

The input is a string of pancakes followed by the size of the pancake flipper

**Final output:**

```
Case #1: 3
Case #2: 4
Case #3: IMPOSSIBLE
```

# Thank You