

Kitty and Katty

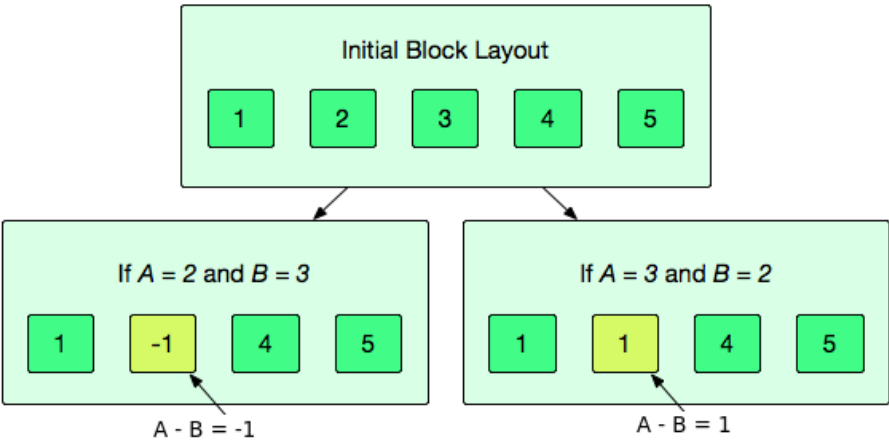
Kitty and Katty have N plastic blocks. They label the blocks with sequential numbers from 1 to N and begin playing a game in turns, with Kitty always taking the first turn. The game's rules are as follows:

- For each turn, the player removes 2 blocks, A and B , from the set. They calculate $A - B$, write the result on a new block, and insert the new block into the set.
- The game ends when only 1 block is left. The winner is determined by the value written on the final block, X :
 - If $X \% 3 = 1$, then Kitty wins.
 - If $X \% 3 = 2$, then Katty wins.
 - If $X \% 3 = 0$, then the player who moved last wins.

Recall that $\%$ is the [Modulo Operation](#).

Given the value of N , can you find and print the name of the winner? Assume that both play optimally.

Note: The selection order for A and B matters, as sometimes $A - B \neq B - A$. The diagram below shows an initial set of blocks where $N = 5$. If $A = 2$ and $B = 3$, then the newly inserted block is labeled -1 ; alternatively, if $A = 3$ and $B = 2$, the newly inserted block is labeled 1 .



Input Format

The first line contains a single positive integer, T (the number of test cases or games). The T subsequent lines each contain an integer, N (the number of blocks for that test case).

Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 10^5$

Output Format

For each test case, print the name of the winner (i.e.: either **Kitty** or **Katty**) on a new line.

Sample Input

```
2
2
3
```

Sample Output

```
Kitty
Katty
```

Explanation

Test Case 0:

$N = 2$ so there are two blocks labeled **1** and **2**. Kitty chooses $A = 2$ and $B = 1$, then inserts a new block with the label **1** (the result of $2 - 1$). The game ends, as there is now only **1** block in the set. The label on the last block, X , is **1**, so we calculate $result = 1 \% 3 = 1$. Because $result = 1$, Kitty wins and we print `Kitty` on a new line.

Test Case 1:

$N = 3$, so there are three blocks labeled **1**, **2**, and **3**. No matter how Kitty makes the first move, Katty will win. If Kitty chooses $A = 3$ and $B = 2$ on the first move and inserts a block labeled **1** (the result of $3 - 2$), the set of blocks becomes $\{1, 1\}$. Katty then must choose $A = 1$ and $B = 1$ and insert a new block labeled **0** (the result of $1 - 1$). The game ends, as there is now only **1** block in the set. The label on the last block, X , is **0**, so we calculate $result = 0 \% 3 = 0$. Because $result = 0$ and Katty made the last move, Katty wins and we print `Katty` on a new line.