



Cats and a Mouse

locked

by ma5termind

Problem

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Two cats named **A** and **B** are standing at integral points on the x-axis. Cat **A** is standing at point **x** and cat **B** is standing at point **y**. Both cats run at the same speed, and they want to catch a mouse named **C** that's hiding at integral point **z** on the x-axis. Can you determine who will catch the mouse?

You are given **q** queries in the form of **x**, **y**, and **z**. For each query, print the appropriate answer on a new line:

- If cat **A** catches the mouse first, print `Cat A`.
- If cat **B** catches the mouse first, print `Cat B`.
- If both cats reach the mouse at the same time, print `Mouse C` as the two cats fight and mouse escapes.

Input Format

The first line contains a single integer, **q**, denoting the number of queries.

Each of the **q** subsequent lines contains three space-separated integers describing the respective values of **x** (cat **A**'s location), **y** (cat **B**'s location), and **z** (mouse **C**'s location).

Constraints

- $1 \leq q \leq 100$
- $1 \leq x, y, z \leq 100$

Output Format

On a new line for each query, print `Cat A` if cat **A** catches the mouse first, `Cat B` if cat **B** catches the mouse first, or `Mouse C` if the mouse escapes.

Sample Input 0

```
3
1 2 3
1 3 2
2 1 3
```

Sample Output 0

```
Cat B
Mouse C
Cat A
```

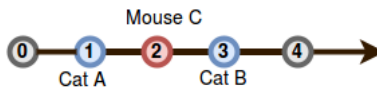
Explanation 0

Query 0: The positions of the cats and mouse are shown below:



Cat **B** will catch the mouse first, so we print `Cat B` on a new line.

Query 1: In this query, cats **A** and **B** reach mouse **C** at the exact same time:



Because the mouse escapes, we print `Mouse C` on a new line.

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Submissions: 1201

Max Score: 15

Difficulty: Easy

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☆☆☆☆☆

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C#

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using System.Linq;
5 class Solution {
6
7     static void Main(String[] args) {
8         int q = Convert.ToInt32(Console.ReadLine());
9         for(int a0 = 0; a0 < q; a0++){
10             string[] tokens_x = Console.ReadLine().Split(' ');
11             int x = Convert.ToInt32(tokens_x[0]);
12             int y = Convert.ToInt32(tokens_x[1]);
13             int z = Convert.ToInt32(tokens_x[2]);
14
15             int cat_a = Math.Abs(x - z);
16             int cat_b = Math.Abs(y - z);
17
18             if (cat_a < cat_b)
19             {
20                 Console.WriteLine("Cat A");
21             }
22             else if (cat_b < cat_a)
23             {
24                 Console.WriteLine("Cat B");
25             }
26             else if (cat_a == cat_b)
27             {
28                 Console.WriteLine("Mouse C");
29             }
30
31         }
32     }
33 }
34
```

Line: 15 Col: 13

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☐ Test against custom input

Run Code

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