

Problem: Cats & The Mouse

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

You are given `Q` queries in the form of `A`, `B`, and `C`. For each query, print the appropriate answer on a new line:

- If cat `A` catches the mouse first, print `A`.
- If cat `B` catches the mouse first, print `B`.
- If both cats reach the mouse at the same time, print `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 `A` (cat `A`'s location), `B` (cat `B`'s location), and `C` (mouse `C`'s location).

Constraints

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Output Format

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

Sample Input 0

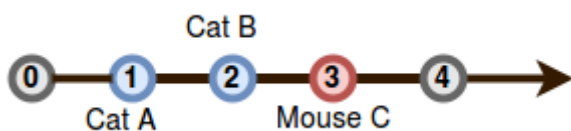
```
3
1 2 3
1 3 2
2 1 3
```

Sample Output 0

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

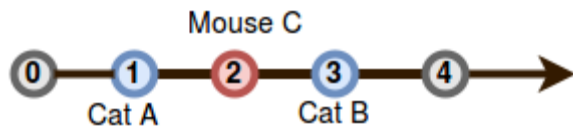
Explanation 0

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



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

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



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

Solution

```
main()
{
    int queries;
    int catA, catB, mouseC;

    cin >> queries;
    for(int i=0; i<queries; i++)
    {
        cin >> catA >> catB >> mouseC;
        int distance1=abs(mouseC- catA);
        int distance2=abs(mouseC - catB);

        if(distance1==distance2)
            {cout<<"Mouse C";}
        else
            { (distance1 < distance2 ? cout<<"Cat A" : cout<<"Cat B"); }
        cout<<endl;
    }
    return 0;
}
```

- Anshul Aggarwal