You all are familiar with second degree equation. Which is

$$ax^2 + bx + c = 0$$

There are two roots for this equation. Yes you already know that. Well, *Fariha* knows that too. What she doesn't know that, these two roots might not always be ***real number***1. The roots might be imaginary based on the given values of the constants a, b and c.

You are *Fariha*'s best friend and very good at mathematics. She request you help her.

Now will be given three **integers** which are the values of a, b and c respectively. You have to find out whether the roots are real number or Imaginary Number.

Input:

First input will be *Q (1 <= Q <= 1000)* That means you have to run this program for **Q** queries. For each queries input will consist of three(3) integer numbers. Which are a, b and c. Where (0 <= a, b, c <= 10000).

Output:

For each queries you have to determine whether the two roots of Second Degree Equation $ax^2 + bx + c = 0$ is Real Number or Imaginary Number.

If the roots are Imaginary Number Print "imaginary" (without the quotes).
Or If the roots are Real Number Print "real" (without the quotes).

That means, for each input you have to either print "imaginary" or "real" in each line.

See Sample Input Output for better understanding.

Sample Input:

```
2
10  5  19
3  50  4
```

Sample Output:

```
imaginary
real
```

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