3682 - Triangle Quality

Description

The Triangle is a special figure that is useful for many applications in real life. One important property is that a triangle is the polygon with the minimum number of edges that can be formed. Since they are so important, they can be also classified by their quality.

Let's define the quality of a triangle as the triple product of the sum of the lengths of two of its sides minus the length of its third side, divided by the product of the lengths of its sides. Mathematically, the quality of a triangle with sides of lengths ***a***, ***b***, and ***c***, can be expressed through the following formula:

TQ = ((b + c - a) * (a + b - c) * (c + a - b)) / (a * b * c)

According to its quality, a triangle is classified as:
• Equilateral if ***TQ*** = 1
• Good if 0.5 < ***TQ*** < 1
• Bad if 0 < ***TQ*** 0.5
Your task is to determine the classification of a set of triangles.

Input specification

In the first line of input, there is a single positive integer ***T*** (***T*** **10000)** denoting the number of test cases. Each of the next ***T*** lines contains three space separated integers ***a***, ***b*** and ***c*** denoting the length of each side of the triangle. No side has length greater than **10000**. It is guaranteed that the given values form a valid triangle.

Output specification

Print exactly ***T*** lines, each one containing the corresponding classification of the given triangle in that test case. A classification should be one of the words "*equilateral*", "*good*" or "*bad*".

Sample input

```
3
2 2 2
6292 4360 7232
1744 8725 9107
```

Sample output

```
equilateral
good
bad
```

Hint(s)

Source	Luis Manuel Díaz Barón
Added by	**luismo**
Addition date	2016-06-10
Time limit (ms)	0
Test limit (ms)	0
Memory limit (kb)	0
Output limit (mb)	64
Size limit (bytes)	0
Enabled languages	Bash C C# C++ C++11 Java JavaScript-NodeJS Pascal Perl PHP Prolog Python Ruby Text