Problem E
Twinkle, Twinkle, Little Triangle
Max no. of test cases: 30
Time limit: 1 second

Zeus plans to create a new star cluster. He establishes a two-dimensional coordinate system on a plane. The origin (0,0), has a star numbered as no.1. He extends three stars outward at intervals of 120°, positioned at $(L,0), (-\frac{1}{2}L, \frac{\sqrt{3}}{2}L)$, and $(-\frac{1}{2}L, -\frac{\sqrt{3}}{2}L)$, and are labeled as stars no.2, no. 3, and no. 4, respectively.

Furthermore, originating from each of the above three stars, no.2, no.3, and no.4, Zeus projects three additional stars outward with half of the previous length, namely $\frac{L}{2}$, and at intervals of 120°. These new stars are then rotated counterclockwise by 30° around the corresponding central star to determine their final positions. Following the same procedure, more new stars are generated iteratively. Note that from star i, three stars, namely stars no.$3i - 1$, $3i$, and $3i + 1$ are created. Consequently, stars originate from no.3 are named as no.8, no.9, and no.10; stars originate from no.4 are identified as no.11, no.12, and no.13; and stars originate from no. 5 are identified as no. 14, no. 15, and no. 16. An illustration of the above explanations can be found in Figure 1.
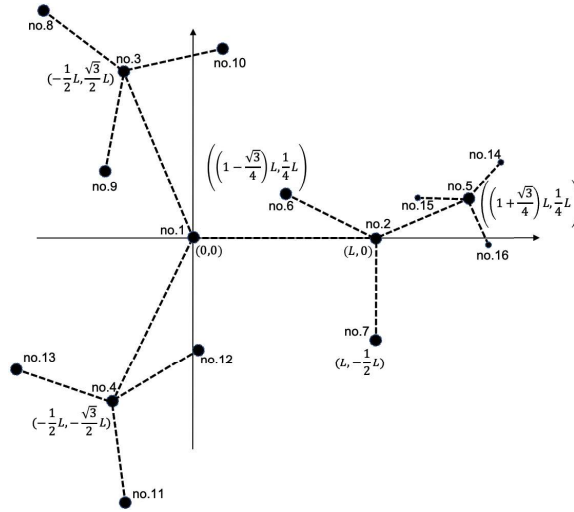

Figure 1: An illustration of forming the star cluster. Note placement of stars (black dots) in this figure may not be true to scale.

As shown in Fig. 1, stars no.5, no.6 and no.7 originate from star no.2, and are $\frac{L}{2}$ from star no.2. These 3 stars extend from star no.2 along the axis defined by star 2 and its central star (namely star 1), resulting in the points $(\frac{3}{2}L, 0), (\frac{3}{4}L, \frac{\sqrt{3}}{4}L)$, and $(\frac{3}{4}L, -\frac{\sqrt{3}}{4}L)$. After a 30° counterclockwise rotation around star no.2, their positions become: $((1 + \frac{\sqrt{3}}{4})L, \frac{1}{4}L), ((1 - \frac{\sqrt{3}}{4})L, \frac{1}{4}L)$, and $(L, -\frac{1}{2}L)$. These three new stars are subsequently

designated as no.5, no.6, and no.7 in a counterclockwise sequence. Furthermore, stars no.14, no.15, and no.16, all originate from star no.5 along the axis defined by star 5 and its central star (namely star no.2). Their distance to star no.5 are all $\dfrac{L}{2 \times 2}$.

Given the star cluster formed from above procedure, please determine the type of triangles that is formed from any three stars.

Input File Format

The first line has an integer n ($n \leq 30$), denoting the number of test cases. The second line contains an integer L. The next n lines each has 3 integers, which are stars' numbers selected to form a triangle. There are at most 100 stars.

Output Format

For each test case, output whether the triangle formed is "Equilateral" or "Isosceles". If it is neither, then output whether the triangle is "Right", "Acute" or "Obtuse". If the three points cannot form a triangle, then output "Null" on a single line. For this task, length or degree accuracy is set to 10^{-5}.

Type	Definition
Equilateral	all three sides have the same length
Isosceles	only two sides have the same length
Right	one angle is right angle (equals to 90°)
Acute	angles are all acute (less than 90°)
Obtuse	one angle is obtuse (greater than 90°)

Sample Input

```
3
100
2 3 4
3 4 1
7 3 2
```

Output for the Sample Input

```
Equilateral
Isosceles
Obtuse
```