Find Me if You Can
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Latin & Abir setting A problem for UIU Coder Combat 4.0. Latin decided to give a string problem (string consists of the small latin letter 'a-z') but Abir proposed to add some integer (1≤n≤9) in that string.

Now your task is to find out the integer values (skip if duplicate exists) and their positions. If there exists only one integer then check, is it possible to make a valid triangle!? Triangles are categorized into three categories based on the side values of a valid triangle: For this problem, we will consider only two types of valid triangles - **3_Equal** and **2_Equal.**
3_Equal - All three sides of a valid triangle are equal.
2_Equal - Exactly two of the sides of a valid triangle are equal. The sum of the lengths of any two sides of a triangle has to be greater than the length of the third side.

Input: The first line contains single integer t (1≤t≤1000) — the number of test cases. Next t lines contain the test cases — It contains a string s(1≤s≤100) — the string which consists of small latin letter & some integers.

It's guaranteed that the integer value will always exist.

Output: Print T times— two per test case. For each test case print the index where the integer exists and in the second line print those values if exist in descending order. Otherwise, if only one integer exists (even after removing duplicates) print all the indexes where the value exists and also print if **3_Equal** or **2_Equal** or **Invalid.**

Example:

Sample Input	Sample Output
4 uni4ted5inter4nation7al u4iu 8uni9ver7s2ity t6e6st	3 7 13 20 7 5 4 1 4 Invalid 0 4 8 10 9 8 7 2 1 3 6 3_Equal

Note: In the first sample printed the index in the first line. In the second line, printed the integer value in descending order (skipping duplicate values) 4,5,4,7 from the string we just took a single 4 and printed as output 7 5 4 in descending order.

In the second text case, we got only one integer from which integer we can't make a valid triangle (conditions described in the problem statement).