Poltu and Attendance

Poltu is a school going kid. He loves to go to school. His class starts at 8 am. Since he is too lazy to wake up early in the morning, he never appears in the class without getting late. Hence most of the times he misses the attendance of the first class. That means he is considered absent in the class. According to the rule of the school if any student remains absent in at least k classes out of 30 consecutive classes, his/her parents will be informed about the absence.



Now Poltu is worried as he often manages to attend the class in time. He provides you the attendance sheet of the last 30 consecutive classes. Can you determine whether he is in danger or not?

Input

Input starts with an integer T ($1 \le T \le 10$) – the number of test cases.

The first line of each case contains an integer k ($1 \le k \le 30$) which is described above.

The second line contains a string of size 30. Each character of the string is either 1 or 0. If the i^{th} character is 1, it means he was present in the i^{th} class and if the i^{th} character is 0, it means he was absent in the i^{th} class.

Output

For each case, Print :D if he is safe. Print :(otherwise.

Sample Input	Sample Output
2	:D
7	:(
1111011101111101110101111111011	
5	
1111011101111101110101111111011	

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