1595 - Multiples of Nine

Description

A good way to determine if N is an integer multiple of 9 is calculating the sum S of its digits. If S is a multiple of 9 then so is N, to determine if S is a multiple of 9 performs the same task. The number of times this procedure is performed to determine if N is a multiple of 9 is known as the 9-degree of the number N. You must determine if a positive integer multiple of 9 and if so the 9-degree.

Input specification

The input consists of a series of lines, each line contains a positive integer that could have up to 1000 digits. The line containing the number 0 indicates the end of the entry.

Output specification

For the standard output for each input number must be printed in the format shown in the example if the number is or is not a multiple of 9, and if so should give the value of your 9-degree.

Sample input

```
999999999999999999999
9
9999999999999999999999999999998
0
```

Sample output

```
999999999999999999999 is a multiple of 9 and has 9-degree 3.
9 is a multiple of 9 and has 9-degree 1.
9999999999999999999999999999998 is not a multiple of 9.
```

Hint(s)

Source	UCI Java Cup Edition
Added by	**ymondelo20**
Addition date	2011-11-15
Time limit (ms)	1000
Test limit (ms)	1000
Memory limit (kb)	130000
Output limit (mb)	64
Size limit (bytes)	30000
Enabled languages	C C# C++ Java Pascal Perl PHP Python Ruby Text