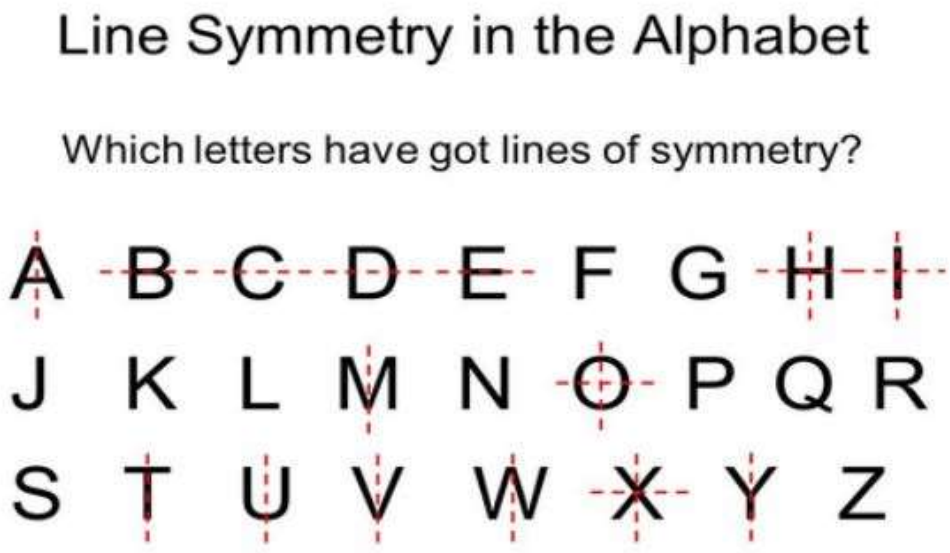
Alphabet Symmetry

Time Limit 1 second

We experience symmetry every day. Mirror (or reflection) symmetry divides a figure or design into halves that are mirror images. In other words, objects are the same on both sides of a line (usually in the middle). This line or axis can be located either vertically or horizontally. Butterflies are good examples of mirror symmetry in nature. In fact, most animals and plants exhibit some forms of symmetry in their body shape and their markings. Mirror symmetry is found in manufactured objects, too. In this activity, you look for symmetry in letters of the capital alphabet.



Do you see any lines of symmetry here? Which letters have zero line of symmetry? Which letters have one line of symmetry? Which letters have two lines of symmetry? The example letters F and G have zero lines of symmetry. Those letters cannot be folded in half in any way with the parts matching up. The example letters A and B have only one line of symmetry. Notice that the A has a vertical line of symmetry, while the B has a horizontal line of symmetry. The example letters H and I have two lines of symmetry (vertical and horizontal).

Based on the number of lines of symmetry a letter has, that's how much the letter is "worth". Letters with zero lines of symmetry are worth zero points. Letters with one line of symmetry are worth one point. Letters with two lines of symmetry are worth two points. Do you think you can find out how much my name is worth (MRS. WISBROCK)?

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Now, let's find out how much the words are worth.

Input

The input consists of one or more test cases of words, followed by a final line containing only the value **0**. Each set starts with a line containing an integer, N (1<= N <= 25), which is the number of words in the set, followed by *N* words, one per line. Each word is at most 15 characters long.

Output

For each test case print case number on a line, where *n* starts at 1, followed by the output set as shown in the sample output.

Sample Input	Sample Output
4 MYANMAR COLLEGIATE PROGRAMMING CONTEST 2 ALPHABET SYMMETRY	Case 1: MYANMAR 5 COLLEGIATE 9 PROGRAMMING 7 CONTEST 6 Case 2: ALPHABET 7 SYMMETRY 6

5 HAT ICEBOX DECIDED X-BOX WITHOUT 0	Case 3: HAT 4 ICEBOX 9 DECIDED 8 X-BOX 7 WITHOUT 10