Problem F
Irrational Roots

Input File: F.in
Output File: standard output
Time Limit: 0.1 seconds (C/C++)
Memory Limit: 256 megabytes

Let **n** be a natural number, **n** ≤ 8. Consider the following equation:

$$x^n + c_{n-1}x^{n-1} + c_{n-2}x^{n-2} + \ldots + c_1x + c_0 = 0$$

where $c_{n-1}, c_{n-2}, \ldots, c_1, c_0$ are integers and $c_0 \neq 0$.

It is known that all the **n** roots of the equation are real numbers. We consider that each root **r** of the equation satisfies the condition: -10 ≤ **r** ≤ 10. Also, there might be roots that appear more than once.

Find the number of irrational roots of the equation (an irrational root is a root that is an irrational number).

Input
The input file contains a single test. The first line of the input file contains the value of **n**. The second line contains the values of $c_{n-1}, c_{n-2}, \ldots, c_1, c_0$: each two consecutive values are separated by a single space.

Output
The result will be written to standard output.

Sample input	Sample output
6 12 -12 -454 -373 3754 1680	2