Polynomial evaluation (2)   P72986_en

Write a program that reads a number x and a polynomial $p(z) = c_0 z^0 + c_1 z^1 + \cdots + c_n z^n$, and computes $p(x)$.

Input

Input consists of a real number x followed by the description of the polynomial $p(z)$: the real coefficients $c_n, c_{n-1}, \ldots, c_0$ in this order. (The first sample input/output corresponds to the evaluation of $p(z) = 3 + 4z + 5z^2$ at $x = 2$.)

Output

Print $p(x)$ with 4 digits after the decimal point.

Hint

The expected solution uses Horner's rule.

Sample input 1

```
2
5 4 3
```

Sample output 1

```
31.0000
```

Sample input 2

```
3
10 0 0
```

Sample output 2

```
90.0000
```

Sample input 3

```
-2.5
5.4 0 -2 1
```

Sample output 3

```
-78.3750
```

Problem information

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