evaluate a polynomial

Description

Write a program to evaluate a polynomial. The first input line gives the count and their coefficients of the polynomial. Then evaluate each value in the 2ndline by calling the polynomial function and print the results. For example, "4 5 -2 3 4" represents "f(x) = 5x^3- 2x^2+ 3x+ 4", and "1 2" represents "when x=2, f(x) = ?".

Input

- The first line begins with an integer n (1 ≤ n ≤ 10), representing the number of terms in the polynomial. This is followed by n integers, each representing the coefficients of the polynomial in descending order of powers of x . The coefficients are bounded by -10 ≤ coefficient ≤ 10.

- The second line contains an integer m (1 ≤ m ≤ 21), representing the number of values for which the polynomial should be evaluated. This is followed by m integers, representing the values of x at which the polynomial will be evaluated. Each value of x is bounded by -10 ≤ x ≤ 10.

Output

For each of the m values of x , output the result of evaluating the polynomial at that value. The results should be printed on a single line, with each result separated by a space.

Sample Input 1 📋

```
4 5 -2 3 4
3 1 2 -1
```

Sample Output 1

```
10 42 -6
```

Statistic   Details

AC   WA