



Polynomials ★

114/115 challenges solved
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Problem

Submissions

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poly

The poly tool returns the coefficients of a polynomial with the given sequence of roots.

```
print numpy.poly([-1, 1, 1, 10])      #Output : [ 1 -11  9 11 -10]
```

roots

The roots tool returns the roots of a polynomial with the given coefficients.

```
print numpy.roots([1, 0, -1])         #Output : [-1.  1.]
```

polyint

The polyint tool returns an antiderivative (indefinite integral) of a polynomial.

```
print numpy.polyint([1, 1, 1])        #Output : [ 0.33333333  0.5      1.      0.      ]
```

polyder

The polyder tool returns the derivative of the specified order of a polynomial.

```
print numpy.polyder([1, 1, 1, 1])     #Output : [3 2 1]
```

polyval

The polyval tool evaluates the polynomial at specific value.

```
print numpy.polyval([1, -2, 0, 2], 4) #Output : 34
```

polyfit

The polyfit tool fits a polynomial of a specified order to a set of data using a least-squares approach.

```
print numpy.polyfit([0,1,-1, 2, -2], [0,1,1, 4, 4], 2)  
#Output : [ 1.00000000e+00  0.00000000e+00 -3.97205465e-16]
```

The functions [polyadd](#), [polysub](#), [polymul](#), and [polydiv](#) also handle proper addition, subtraction, multiplication, and division of polynomial coefficients, respectively.

Task

You are given the coefficients of a polynomial P .

Your task is to find the value of P at point x .

Input Format

The first line contains the space separated value of the coefficients in P .

The second line contains the value of x .

Output Format

Print the desired value.

Sample Input

```
1.1 2 3
0
```

Sample Output

```
3.0
```

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Language

Python 3



```
1 import numpy as np
2
3 coefficients = list(map(float, input().split()))
4 x = float(input())
5
6 print(np.polyval(coefficients, x))
```

EMACS

Line: 6 Col: 35



Upload Code as File



Test against custom input

Run Code

Submit Code

You have earned 20.00 points!
114/115 challenges solved.

99%




Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

✓ Test case 0

Compiler Message

✓ Test case 1 

Success

✓ Test case 2 

Input (stdin)

Download

1	1.1 2 3
2	0

Expected Output

Download

1	3.0
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