UWPC

Question 18

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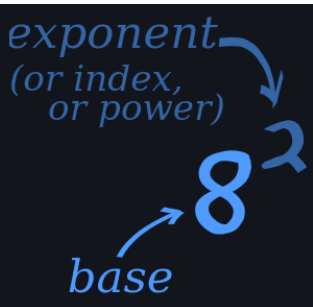
Implement pow(x, n), which calculates x raised to the power n (i.e., xn).



The power (or exponent) of a number says how many times to use the number in a multiplication.

It is written as a small number to the right and above the base number.

In this example the little "2" says to use 8 two times in a multiplication:

$8^2 = 8 \times 8 = 64$

But power can also mean the **result** of using an exponent, so in the previous example "64" is also called the power.

Another example: $2^4 = 2 \times 2 \times 2 \times 2 = 16$
We can say "2 to the power 4 is 16", or we can also say "the 4th power of 2 is 16"

Input

- The first line contains a single floating-point number, x. The base.
- The second line contains a single integer, n. The exponent.

Output

- A single floating-point number to the result of x^n. The result should be rounded to 5 decimal places (add trailing zeros if necessary).

Sample 1

Input

```
2.00000
10
```

Output

```
1024.00000
```

Explanation: $2^{10} = 1024.0$

Sample 2

Input

```
2.10000
3
```

Output

```
9.26100
```

Explanation: $2.1^3 = 9.261$

Sample 3

Input

```
2.00000
-2
```

Output

```
0.25000
```

Explanation: $2^{-2} = 1/2^2 = 1/4 = 0.25$