Mathematic Arithmetic Operations

Given the most common mathematical operations: PEMDAS. Create an algorithm that will take 2 integers, *a* and *b*. The program will then give the value of the two terms given exponents, multiplication, division, addition, and subtraction.

P ARENTHETIC

E XPONENTS

M ULTIPLICATION

D IVISION

A DDITION

S UBTRACTION

Input

The input will consist of a series of pairs of integers *a* and *b*, one pair of integers per line. All integers must real numbers and be less than 10,000.

Output

For each pair of input integers *a* and *b,* will be an output in following order per line by: Parenthetic, Exponent, Multiplication, Division, Addition, and Subtraction.

Sample Input	Sample Output			
2 5	P:	(2, 5)	=	(2, 5)
472 2	E:	2^5	=	32
	M:	2 x 5	=	10
	D:	2 / 5	=	2.5
	A:	2 + 5	=	7
	S:	2 − 5	=	-3
	P:	(472, 2) =		(472, 2)
	E:	472^2	=	222,784
	M:	472 x 2 =		944
	D:	472 / 2 =		236
	A:	472 + 2 =		474
	S:	472 − 2 =		470