Any Base To Any Base

Easy

Prev Next

1. You are given a number n.
2. You are given a base b1. n is a number on base b.
3. You are given another base b2.
4. You are required to convert the number n of base b1 to a number in base b2.

Input Format

A number n
A base b1
A base b2

Output Format

A number of base b2 equal in value to n of base b1.

Any base to any base

Eg $(111001)_2 \rightarrow (\ ?\ )_3$

(1) First Convert to base 10.

(2) Then base 10 to desired base.

$\Rightarrow$ $\overset{5}{1}\overset{4}{1}\overset{3}{1}\overset{2}{0}\overset{1}{0}\overset{0}{1}$ $\Rightarrow$ $2^5 \times 1 + 2^4 \times 1 + 2^3 \times 1 + 2^0 \times 1$

$\Rightarrow 32 + 16 + 8 + 1 \Rightarrow (57)_{10}$

$\Rightarrow (57)_{10} \rightarrow (\ ?\ )_3$

3 | 57		
3 | 19	0	
3 | 6	1	
3 | 2	0	
0	2	

$\Rightarrow (2010)_3$ Answer