Problem L: All Your Base Are Belong to US!

Input File: l.in
Output: to monitor

Given a base, and two positive integers in decimal (base 10), convert the two numbers to the new base, add them, and display their sum in the new base.

Input: Three positive integers denoting the base and the two numbers, respectively. Input numbers will be integers between 0 and 65535. Bases will be between 2 and 10 inclusive. Each case will be on a separate line. The end of input will be denoted by three zeros. Output: An equation for the sum of the two numbers, in the new base.

Example:

In this example, we add 10 and 3 in base 2, and we add 15 and 4 in base 3.

In base 2, 10 = 8 + 2 = 1 * 23 + 0 * 22 + 1 * 21 + 0 * 20 and 3 = 2 + 1 = 1 * 21 + 1 * 20, so their base 2 equivalents are 1010 and 11, respectively. 10 + 3 = 13 = 1 * 23+1 * 22+0 * 21+1 * 20, so the base 2 equivalent of 13 is 1101.

In base 3, 15 = 9 + 6 = 1 * 32+2 * 31+0 * 30 and 4 = 3 + 1 = 1 * 31 + 1 * 30, so their base 2 equivalents are 120 and 11, respectively. 15 + 4 = 19 = 2 * 32 + 0 * 31 + 1 * 30, so the base 3 equivalent of 19 is 201.

Sample Input:

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2 10 3
3 15 4
0 0 0
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Sample Output:

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1010 + 11 = 1101
120 + 11 = 201
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