I • Integers in Rational Bases

Given relatively prime positive integers ***p*** > ***q***, any *positive* integer, ***n*,** can be written uniquely as a linear combination of powers of (***p/q***) with coefficients in the range **0 … (*p*-1)**.

$$n = a0 + a1*(p/q) + a2*(p/q)^2 + \ldots$$

For instance,

$$15 = \mathbf{2}*(3/2)^4 + \mathbf{1}*(3/2)^3 + \mathbf{0}*(3/2)^2 + \mathbf{1}*(3/2) + \mathbf{0}$$

$$15 = \mathbf{4}*(7/4)^2 + \mathbf{1}*(7/4) + \mathbf{1}$$

Write a program to find the base (***p/q***) expansion of an integer ***n***. As digits for the base (**p/q**) expansion, use the characters **0-9**, then **A-Z**, then **a-z**.

Input

Input consists of a single line that contains 3 space separated decimal values. They are the numerator ***p*** (**3 <= *p* <= 62**) of the fractional base, followed by the decimal denominator ***q*** **(2 <= *q* <= (*p*-1))** of the fractional base, followed by the positive integer ***n*** to be represented in base ***(p/q)***. Values of ***p***, ***q***, and ***n*** will be chosen so that ***p*** and ***q*** are relatively prime, the expansion has at most 40 digits and ***n*** will fit in a 32-bit unsigned integer.

Output

Your program should produce a single output line containing a string of digits [***0-9,A-Z,a-z***] with the **most significant** digit first.

Sample 1:

Sample Input	Sample Output
3 2 15	21010

Sample:

Sample Input	Sample Output
7 4 15	411

Sample 3:

Sample Input	Sample Output
59 31 987654321	V3bkX4XQVKITSN3ur6TAGF1pSFi