Problem C - Basic remains

Given a base b and two non-negative base b integers p and m, compute p mod m and print the result as a base b integer. p mod m is defined as the smallest non-negative integer k such that p = a*m + k for some integer a.

Input consists of a number of cases. Each case is represented by a line containing three unsigned integers. The first, b, is a decimal number between 2 and 10. The second, p, contains up to 1000 digits between 0 and b-1. The third, m, contains up to 9 digits between 0 and b-1. The last case is followed by a line containing 0.

For each test case, print a line giving *p* mod m as a base-b integer.

Sample Input

2 1100 101 10 123456789123456789123456789 1000

Output for Sample Input

10 789

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