

Eid Online Shopping

Eid day is close to the door, Nowadays Eid means shopping. For decrease the troublesome there are many online shopping center . By online shopping center everybody can check their favourite products without going shopping mall. By using internet they can check the color, size , price of their products. If everything match ok, they ordered it and received their products.

Shova and Rupa are two friends. So they want to shopping their Eid dress from online shopping. So using laptop they start to select their favourite dress “Pakhi” from “Kashem Online Shopping”.

“Kashem Online Shopping” maintain a way to show their price product. They like number system. So their products displayed a n based number system. Similarly Shova and Rupa also like number system . They also love m based number system. And now they want to convert the product price in their loved based number.

Input:

First line indicates the number of test case ($t \leq 300$) , next three inputs(s, n, m) , where s indicates the product price displayed by “Kashem Online Shopping” in nth base, and n indicates their liked based number and m indicates Shova’s and Rupa’s loved based number. ($2 \leq n, m \leq 16$) and s is always fitted in 10^9 in decimal based number system. And s contains only digit(‘0’ to ‘9’) and (‘A’ to ‘F’).

Output:

Just print converting number from n based to m based number system.

Sample Input	Sample Output
3 1001 2 10 A6 16 2 120 10 8	9 10100110 170

Problem Setter:

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