SPOJ Problem Set (tutorial)

429. Simple Numbers Conversion

Problem code: TCONNUM

Wersja polska English version

Every integer number n is represented in positional number system of base r by a sequence of digits $0 <= d_i < r$, so the value is equal to:

$$n = d_0 + r * d_1 + r^2 * d_2 + r^3 * d_3 + ...$$

Your task is to convert a given number in r-base represantation into s-base representation, for example: decimal 231 into binary 11100111. Assume that $r <= 36$ and the digits are 0,1,2,3,4,5,6,7,8,9, *A*, *B*, *C*, *D*, *E*, *F*, *G*, *H*, *I*, *J*, *K*, *L*, *M*, *N*, *O*, *P*, *Q*, *R*, *S*, *T*, *U*, *V*, *W*, *X*, *Y*, *Z*.

Input

N [the number of series <= 1000]
n r s [$n <= 10^{1000}$, *r*,*s* <= 36]

Output

n [*s*-base representation of number *n*]

Text grouped in [ ] does not appear in the input and output file.

Example

Input:
```
3
231 10 2
ABC 15 10
XYZ 36 2
```

Output:
```
11100111
2427
1010101111111011
```

Test cases

There are five categories of the input data:

- Test case 1: (1 pt), $r = 2$ and $s = 10$, or conversely, $n<=10^9$, $N = 100$,
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- Test case 2: (1 pt), 2 <= r,s <= 10, n<=10^9, N = 1000,
- Test case 3: (1 pt), 2 <= r,s <= 32, n<=10^9, N = 1000,
- Test case 4: (3 pts), 2 <= r,s <= 10, n<=10^{1000}, N = 1000,
- Test case 5: (4 pts), 2 <= r,s <= 32, n<=10^{1000}, N = 1000.

Added by: Michał Małafiejski
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Time limit: 1s-20s
Source limit:5000B
Languages: C C++ 4.0.0-8 PAS gpc PAS fpc
Resource: -