Problem A

Mastering Master Theorem

Time limit: 1s
Memory limit: 512 MB

This task is now due. Steven has redacted the original problem statement and in the event this task is reused for the future iteration of CS3230, it will be "modified" to the "stronger" version.

Input format

The first line of input contains an integer TC, denoting the number of test cases, one line per test case.

Each test case contains five numbers: integer a, floating-point b, floating-point c, floating-point d, and integer k as denoted in the problem description.

Output format

For each test case, print the required answer.

However, if master theorem is not actually applicable for that test case, print "`not applicable`" (without the quotes) instead.

PS: To print Θ, you can use unicode escape character '\u0398'.

Constraints

- $1 \leq TC < 77$;
- $0 < a, c < 77$;
- $1 < b < 77$;
- $0 \leq d, k < 77$.

CS3230 PA1 (03-17 Feb 2023)

Contest over!

Problems

A ✓
B1 ✓
B2 ✓

Standings

Submissions

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C++
Choose file No file chosen
Submit

Floating-point numbers b, c, d have at most 7 digits after decimal point.

Sample Input

Copy Input

```
5
7 2.0 7.7 2.0 0
8 2.0 2.1 0.0 0
2 2.0 2.0 1.0 0
1 2.0 1.0 0.0 0
4 2.0 1.0 3.0 0
```

Sample Output

Copy Output

```
T(n) = Θ(n^2.8)
T(n) = Θ(n^3)
T(n) = Θ(n log n)
T(n) = Θ(log n)
T(n) = Θ(n^3)
```

Notes

Dr Steven Halim.

Last used: CS3230, 03-17 Feb 2023.