Problem A. Perfect Cube

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

Talal is a Computer Science student in IIUM. He likes integers. In particular, he likes integers which are also a perfect cube. A perfect cube is an integer whose cube root is also an integer. For example $1, 8, 27, 64, 125, etc.$ are examples of perfect cubes but $9, 25$ and 113 are not.

For obsessive reason, Talal wants to print and frame a list of perfect cubes between two integers A and B (inclusive). He is deciding the size of the frame and to do so, he needs to know how many perfect cubes are between the range. Help Talal find the number of perfect cubes in the given range between A and B inclusively.

Input

The first line has a positive integer T, $(0 \leq T \leq 100\,000)$, denoting the number of test cases. This is followed by each test case per line. Each test case consists of a single line containing two integers A and B. separated by a single space. $(1 \leq A \leq B \leq 2000\,000\,000)$

Output

For each test case, output a line in the format **Case #x: M**, where x is the case number (starting from 1) and M is the number of perfect cubes in the given range between A and B inclusive.

Example

standard input	standard output
10 1 27 1 2000000000 42 1011 170 1254 963 2504 282 2430 996 4262 392 2364 293 3308 719 8614	Case #1: 3 Case #2: 1259 Case #3: 7 Case #4: 5 Case #5: 4 Case #6: 7 Case #7: 7 Case #8: 6 Case #9: 8 Case #10: 12

Note

In the example, first test case, the answer is 3 as the perfect cubes are 1, 8 and 27.