HardDisk Drive

Yesterday your dear cousin Coach Pang gave you a new 100MB hard disk drive (HDD) as a gift because
you will get married next year.
But you turned on your computer and the operating system (OS) told you the HDD is about
95MB. The 5MB of space is missing. It is known that the HDD manufacturers have a different capacity
measurement. The manufacturers think 1 "kilo" is 1000 but the OS thinks that is 1024. There are
several descriptions of the size of an HDD. They are byte, kilobyte, megabyte, gigabyte, terabyte,
petabyte, exabyte, zetabyte and yottabyte. Each one equals a "kilo" of the previous one. For example
1 gigabyte is 1 "kilo" megabytes.
Now you know the size of a hard disk represented by manufacturers and you want to calculate the
percentage of the "missing part".

Input:

The first line contains an integer T , which indicates the number of test cases($1 \leq T \leq 100$).
For each test case, there is one line contains a string in format 'number[unit]' where number is a
positive integer within [1, 1000] and unit is the description of size which could be 'B', 'KB', 'MB', 'GB',
'TB', 'PB', 'EB', 'ZB', 'YB' in short respectively.

Output:

For each test case, output one line 'Case #x: y%', where x is the case number (starting from 1) and y
is the percentage of the "missing part". The answer should be rounded to two digits after the decimal
point.

Hint: In the first example, the manufacturers think 100MB = 10^5 KB = 10^8 B, but the OS thinks 108
100MB = 100×2^{10} KB = 100×2^{20} B. So $1 - 10^8/(100 \times 2^{20}) = 4.63\%$ is missing.

Sample Input:

2
100[MB]
1[B]

Sample Output:

Case #1: 4.63%
Case #2: 0.00%