

C: Contest Struggles

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Problem

For n numbers between 0 and 100 you are given the average of all numbers (d), and the average of a subset of k of those numbers (s). Compute the average of the remaining numbers.

Solution

- The sum of all numbers is $d \cdot n$.
- So the sum of the remaining numbers is $d \cdot n - s \cdot k$.
- That parts contains $n - k$ numbers, so the average of those numbers is $(d \cdot n - s \cdot k)/(n - k)$.
- When the average is < 0 or > 100 , print impossible.

Gotchas

- Precision issues, e.g. answers just below 0 or just above 100

Statistics: 180 submissions, 118 + ? accepted