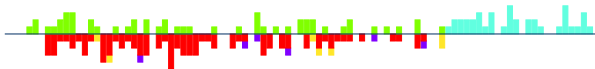


I: Implementation Irregularities

Problem Author: Ragnar Groot Koerkamp

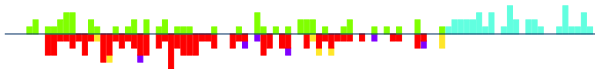


- **Problem:** Given a list of $n \leq 10^5$ problems, the computer time t_i needed to solve each of them, and the time s_i each was solved, find the minimal number of computers used.

Statistics: 190 submissions, 52 accepted, 39 unknown

I: Implementation Irregularities

Problem Author: Ragnar Groot Koerkamp

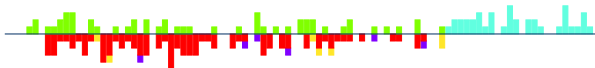


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- **Insight:** If there are C computers and the team solves their k th problem after s minutes, the total computer time available for the first k problems is $C \cdot s$.

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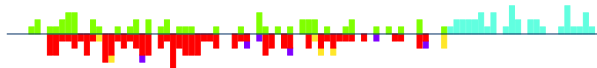


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- Sort the problems by solve time, discarding any unsolved problems.

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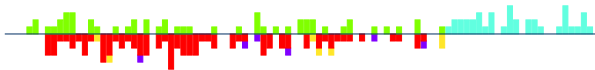


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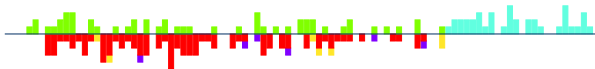


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- The answer C is the maximum of $\left(\sum_{i=1}^k t_i\right) / s_k$, rounded up.

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I: Implementation Irregularities

Problem Author: Ragnar Groot Koerkamp



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- Alternatively, you can binary search.

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