Turtle vs. Rabbit Race: Optimal Trainings

Notice that if we choose some r such that the sum of $a_l, a_{l+1}, \ldots, a_r$ does not exceed u, then completing each of the sections will increase our abilities.

Using prefix sums and binary search, we will find the largest such r. Smaller values will increase our abilities by a smaller amount, so there is no point in checking them.

However, it is worth considering the value $r' = r + 1$. Despite the fact that some of the sections of the r' track will only decrease our abilities, the overall increase may be positive (for example, if the increases on the r' track are $[3, 2, 1, 0, -1]$). Considering following values is pointless, as completing all following tracks will only decrease our abilities.

Also, for finding the answer, ternary search can be used.