CLASSIC TAPA CONTEST SCORING SYSTEM

Summary

- 2 minutes penalty for each wrong submission
- 15% time penalty for each late day (maximum 2 late days are allowed – so a puzzle can be solved upto 72 hours after it is uploaded)
- Each puzzle has its own points, which is computed from solving times of top 10% players on that day.
- Each player gets points for solving a puzzle based on own solving time and others' solving times. Exponential distribution is used.
- Total points for a player is sum of puzzle points over 50 days.

PROCESS

Day N :

- N^{th} puzzle is published.
- Players who solve $N\text{-}1^{th}$ puzzle on Day N, get a penalty 15%. Their solving time is recorded as "1.15 * submission time"
- Players who solve $N\text{-}2^{th}$ puzzle on Day N, get a penalty of 30%. Their solving time is recorded as "1.3 * submission time"
- At the end of 24 hours, timing list for N^{th} puzzle is published. Complete timing list and points of $N\text{-}2^{th}$ puzzle is published.

SCORING

AVE: Average solving time of the top 10% (in seconds) in each day
e.g. if the first 10% is 13.2 people; calculate as [(sum of first 13's solving times)+0.2(14th solving time)]/13.2*

MED: Average solving time of the middle 10% (in seconds)
If there are 100 players, average solving time of players ranked 55 to 65

PuPo (Puzzle points): Square root(AVE)

CoTi: Competitor's time (seconds)

CoPo (Competitor's points): PuPo/(2^((CoTi-AVE)/(MED-AVE)))

$$CoPo = \frac{\sqrt{AVE}}{2^{\frac{CoTi - AVE}{MED - AVE}}}$$

ToPo (Total Points): Sum of CoPo's