

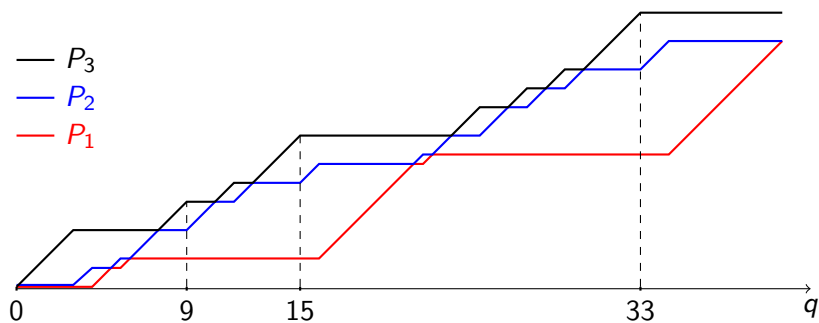
## Interpretation of an $n$ -system as a game (Luca Ghidelli)

We can view an  $n$ -system as giving the positions of  $n$  players  $P_1, \dots, P_n$  moving on a line, as a function of the time  $q$ , according to the following rules.

- At time  $q = 0$ , they all stand at position 0.
- They always remain in the same order ( $P_1$  cannot overpass  $P_2$ , nor  $P_2$  can overpass  $P_3$ , etc).
- At any time, only the player who has the ball can move and he moves at constant speed 1.
- The player who holds the ball can only pass it to a player that is behind him or next to him.



## Example of combined graph of a 3-system



(Same as in the animation.)