

Conference: solution

For the first question, we just iterate in reverse chronological order, keeping for each scientist if there is currently a "path" to a journalist. When, for some scientist, there is for the first time a path to a journalist, this is the day he will make his invention.

For the second one, we just iterate in chronological order and keep for each person if they know any invention by that time.

For the third one, we iterate in reverse chronological order and for every person we keep the earliest time that some information from him can reach a journalist, as well as the id of that journalist. If it is the day that some scientist invented something, then the journalist found above is the one to know first about this.