Election day is in November of 2020, but with campaigning already in full swing, Worldsite, a social media site is expected to face a surge in Fake news in its feed. Now, as a moral and social obligation Worldsite must catch these fake news articles and delete them from its website. For the company to spot a Fake news article the company has editors in its payroll who go through each news article and then vet it to make sure no fake news gets to the public. The forecast on news articles for the next 10 months is as shown below:

|  |  |
| --- | --- |
| Month  | Number of News articles |
| January |  400,000  |
| February |  550,000  |
| March |  560,000  |
| April |  580,000  |
| May |  630,000  |
| June |  640,000  |
| July |  680,000  |
| August |  730,000  |
| September |  800,000  |
| October |  1,200,000  |

As of December there are 200,000 news articles. Now for each article to be verified it takes an editor 30 minutes to do so. An editor can work up to 150 hours a month. If the number of articles cannot be finished by the editors in payroll, then freelance editors are hired. At the beginning of each month, freelance editors can be hired or fired. A freelance editor too can work up to 150 hours a month at $1000 per month and for times spent more than this they are paid an overtime of $40 per hour to a maximum of 170 hours in that month(20 extra hours of overtime for that month)

 Each hired freelancer costs $1,000, and each fired freelancer costs $1,500. Although there is no actual cost associated with unvetted/unread article but to safeguard the policies, the cost is kept at $50. Worldsite wants us to determine the hiring and firing schedule so that HR is given enough time to execute the plan.