

CSE475 Gameday #2 Strategy

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Our dominant strategy is to complete as many tasks as possible by place a large number of short-lived announcements.

1 Announcement Strategy

At the beginning of each round, we will calculate the total number of subtasks that we need in order to complete all of our tasks. We will then divide those subtasks such that we can make two-minute announcements, staggering the start of each announcement by one minute, for eight minutes. If all goes in our favor, we will have all of our tasks completed at the end of eight minutes. Assuming that is not going to be the case, we have another eight minutes to re-announce any subtasks that we do not have completed. At the end of 16 minutes, we will assess the completeness of each task and decide to either sell those subtasks or pursue the remaining subtasks we need.

Total number of subtasks per announcement:

$$\frac{TotalSubtasks}{8} = \frac{Subtasks}{Announcement}$$

Number of announcements each task will take:

$$\forall Tasks, \frac{Subtasks_{Task_i}}{\frac{Subtasks}{Announcement}} = \frac{Announcements}{Task_i}$$

Number of subtasks per task in each announcement:

$$\forall Subtask \in Task_i, \frac{Subtask_j}{\frac{Announcements}{Task_i}} = \frac{Subtasks_{Task_i}}{Announcement}$$

2 Bidding Strategy

Take any extra subtasks that will not apply to our tasks, and use them to place bids. Given the aggressive nature of our announcement strategy, we will sacrifice bidding until we have either completed all of our tasks or we reach sixteen minutes. At that point we will start bidding our extra subtasks.