Reflecting on our past contests, it's clear there are a few areas we need more practice with. At the outset, we were able to tackle at least three problems during each contest, which initially felt quite satisfying, even though the score was right at 50%. However, as we progressed through more contests, we came to understand more of where each of us was lacking and where each of us was strongest.

Contest 1: In our first contest, we solved problems like Alphabet Soup with bipartite matching and Burrito with simple simulations. Challenges like Editor Navigation demanded careful handling of moves, while Permutation required some mathematical pattern searching. We also tackled Scientist by constructing a network flow graph. Moving forward, refining cursor movements and permutation algorithms will be important for the final exam**.**

Contest 2: We solved a variety of problems using dynamic programming and optimization techniques. For The n Days of Christmas, precomputing sums of Triangle Numbers allowed for quick query responses without integer overflow. Counting Sequences was addressed with a DP approach akin to the longest common subsequence problem, while Lenny's Lucky Lotto Lists employed recurrence relations for counting lists within constraints. Name Tag utilized string rotations, and Robot Challenge was optimized with a precomputed cost function, achieving a faster runtime. Finally, Tricky Tolls employed DP or memoization to determine minimum costs based on toll booth and arrival time. Focusing on refining DP techniques and optimizing computations is definitely needed.

Contest 3: In tackling Mixed Set, we implemented backtracking for lexicographical permutations, improving memory usage. For Paint Me, we calculated room painting areas using integer division for paint can estimations. Perfect posed no challenge with integer multiplication for counting repetitions. Railroad required DP for merging train sequences, while Stick Splitting followed a classic Matrix Chain DP pattern with memoization. Lastly, Teamwork demanded optimization for skill level calculation within input constraints. For the final exam, we need to focus on optimizing solutions, especially for challenges like Teamwork, and mastering DP techniques for problems like Railroad and Stick Splitting.

Contest 4: For Euclid, we used cross product magnitudes to find vectors and calculated areas to locate point H. Farmer John's Forest was simplified to finding the convex hull and adding the circle's circumference. Presidential Security found the minimum spanning tree for the least cost connection. Interesting Intersections manipulated vectors and quadratic equations. Squirrel Territory determined circle intersections using a double loop. Fujiyama Thursday involved sorting, eating and driving times to allocate students to cars. For the final exam, we need to optimize solutions, especially for challenges like Farmer John's Forest and Interesting Intersections, and understand geometric calculations thoroughly for problems like Euclid and Squirrel Territory.

Contest 5: In Balloon Colors, we checked input matches for x and y colors. Bullseye used binary search, handling overflow carefully. Haircut employed binary search on time for determining which barber will give the haircut. Jumpman could've used DFS/BFS for treasure summing.

Need for Speed used binary search for c, adjusting speeds accordingly. Tri graphs utilized dynamic programming. Further optimization on dynamic programming needs to be reinforced.

Contest 6: We used recursion for Game of Gold and employed integer calculations for Extra Homework. New Island and Radios offered two strategies: Kruskal's Algorithm or binary search. Sleepy Cow Sorting required binary indexed trees. However, Zigzag Subsequence remained unsolved, despite recognizing the need for two binary indexed trees. For the final exam, we aim to optimize our solutions further, especially focusing on challenges like Game of Gold and Zigzag Subsequence.

In summary, reflecting on our preparations for the upcoming exams, we certainly identified areas where improvement was needed. Despite any challenges, we were genuinely enthusiastic about collaborating with each other during those contests. We understood that such collaboration not only fostered camaraderie but also promised more effective problem-solving strategies. It was this collective effort and shared determination that fueled our excitement, driving us to push our boundaries and strive for success together.