

Educational DP Contest @ AtCoder

Link to the contest: <https://atcoder.jp/contests/dp>

- ✓ A - Frog 1
- ✓ B - Frog 2
- ✓ C - Vacation
- ✓ D - Knapsack 1
- ✓ E - Knapsack 2
- ✓ F - LCS - ($O(n^2)$ - minimum Levensteins distance)
- ✓ G - Longest Path - $O(n)$
- ✓ H - Grid 1 - $O(n^2)$ - Pascal Triangle
- ✓ I - Coins - $O(n^2)$
- ✓ J - Sushi - 3 dimensional DP with compression
- ✓ K - Stones - Binary player tracking
- ✓ L - Deque - Interval DP
- ✓ M - Candies - Keeping prefix sums
- ✓ N - Slimes - Interval DP $O(n^3)$ with prefix sums
- ✓ O - Matching - $O(2^n * n)$
- ✓ P - Independent Set - Tree DP
- ✓ Q - Flowers - Segment Tree DP
- ✓ R - Walk - Matrix Expo (my fav)
- ✓ S - Digit Sum - Digit DP
- ✓ T - Permutation - Keeping prefix sums
- ✓ U - Grouping - DP on masks
- ✓ V - Subtree - DFS In and Out
- ✓ W - Intervals
- ✓ X - Tower - Exchange Principle
- ✓ Y - Grid 2 - Binomial Coefficients
- ✓ Z - Frog 3 - Convex Hull Trick