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Unique solved — Zachary Gao

Links: [problem \(problemset\)](#), [Tutorial](#), [submission \(first AC\)](#).

Sort: [Problem rating](#) · [easier first](#)

Filters: none

Count: 609

1.

2183A

[Binary Array Game](#) · [Tutorial](#)

Quality: 23,668 global accepts · Rating: 800 · first AC: 2026-01-07 · C++20 (GCC 13-64) (first AC) · Tags: games

[Zachary_Gao's solution](#)

2.

2178A

[Yes or Yes](#) · [Tutorial](#)

Quality: 25,732 global accepts · Rating: 800 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: greedy, strings

[Zachary_Gao's solution](#)

3.

2180B

[Ashmal](#) · [Tutorial](#)

Quality: 24,577 global accepts · Rating: 800 · first AC: 2025-12-20 · C++20 (GCC 13-64) (first AC) · Tags: greedy, strings

[Zachary_Gao's solution](#)

4.

2180A

[Carnival Wheel](#) · [Tutorial](#)

Quality: 25,874 global accepts · Rating: 800 · first AC: 2025-12-20 · C++20 (GCC 13-64) (first AC) · Tags: brute force, number theory

[Zachary_Gao's solution](#)

5.

2157A

[Dungeon Equilibrium](#) · [Tutorial](#)

Quality: 16,492 global accepts · Rating: 800 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: greedy, implementation, sortings

[Zachary_Gao's solution](#)

6.

2164A

[Sequence Game](#) · [Tutorial](#)

Quality: 20,825 global accepts · Rating: 800 · first AC: 2025-11-06 · C++20 (GCC 13-64) (first AC) · Tags: brute force, sortings

[Zachary_Gao's solution](#)

7.

2161A

[Round Trip](#) · [Tutorial](#)

Quality: 15,719 global accepts · Rating: 800 · first AC: 2025-10-31 · C++20 (GCC 13-64) (first AC) · Tags: games, greedy, implementation, math

[Zachary_Gao's solution](#)

8.

2152A

[Increase or Smash](#) · [Tutorial](#)

Quality: 22,304 global accepts · Rating: 800 · first AC: 2025-10-03 · C++23 (GCC 14-64, msys2) (first AC) · Tags: greedy, implementation

[Zachary_Gao's solution](#)

9.

2127A

[Mix Mex Max](#) · [Tutorial](#)

Quality: 19,641 global accepts · Rating: 800 · first AC: 2025-08-07 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, greedy, math

[Zachary_Gao's solution](#)

10.

2107A

[LRC and VIP](#) · Tutorial

Quality: 22,204 global accepts · Rating: 800 · first AC: 2025-05-05 · C++17 (GCC 7-32) (first AC) · Tags: greedy, number theory

[Zachary_Gao's solution](#)

11.

2053A

[Tender Carpenter](#) · Tutorial

Quality: 21,261 global accepts · Rating: 800 · first AC: 2024-12-28 · C++20 (GCC 13-64) (first AC) · Tags: dp, geometry, greedy, math

[Zachary_Gao's solution](#)

12.

2048A

[Kevin and Combination Lock](#) · Tutorial

Quality: 22,853 global accepts · Rating: 800 · first AC: 2024-12-19 · C++20 (GCC 13-64) (first AC) · Tags: brute force, greedy, implementation, math, number theory

[Zachary_Gao's solution](#)

13.

2039A

[Shohag Loves Mod](#) · Tutorial

Quality: 18,124 global accepts · Rating: 800 · first AC: 2024-11-23 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, number theory

[Zachary_Gao's solution](#)

14.

2031A

[Penchick and Modern Monument](#) · Tutorial

Quality: 20,947 global accepts · Rating: 800 · first AC: 2024-11-15 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, dp, greedy, math

[Zachary_Gao's solution](#)

15.

2035A

[Sliding](#) · Tutorial

Quality: 17,847 global accepts · Rating: 800 · first AC: 2024-10-27 · C++20 (GCC 13-64) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

16.

1987A

[Upload More RAM](#) · Tutorial

Quality: 28,992 global accepts · Rating: 800 · first AC: 2024-06-30 · C++20 (GCC 13-64) (first AC) · Tags: greedy, math

[Zachary_Gao's solution](#)

17.

1984A

[Strange Splitting](#) · Tutorial

Quality: 22,866 global accepts · Rating: 800 · first AC: 2024-06-09 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms

[Zachary_Gao's solution](#)

18.

1981A

[Turtle and Piggy Are Playing a Game](#) · Tutorial

Quality: 24,250 global accepts · Rating: 800 · first AC: 2024-05-31 · C++20 (GCC 13-64) (first AC) · Tags: brute force, greedy, math

[Zachary_Gao's solution](#)

19.

1957A

[Stickogon](#) · Tutorial

Quality: 25,675 global accepts · Rating: 800 · first AC: 2024-04-21 · last AC: 2024-04-24 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

20.

1956A

[Nene's Game](#) · Tutorial

Quality: 24,192 global accepts · Rating: 800 · first AC: 2024-04-13 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, data structures, games, greedy

[Zachary_Gao's solution](#)

21.

1956B

[Nene and the Card Game](#) · [Tutorial](#)

Quality: 22,929 global accepts · Rating: 800 · first AC: 2024-04-13 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: games, greedy

[Zachary_Gao's solution](#)

22.

1942A

[Farmer John's Challenge](#) · [Tutorial](#)

Quality: 18,506 global accepts · Rating: 800 · first AC: 2024-03-30 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, math

[Zachary_Gao's solution](#)

23.

1935A

[Entertainment in MAC](#) · [Tutorial](#)

Quality: 30,325 global accepts · Rating: 800 · first AC: 2024-03-05 · last AC: 2024-03-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, strings

[Zachary_Gao's solution](#)

24.

1923A

[Moving Chips](#) · [Tutorial](#)

Quality: 26,365 global accepts · Rating: 800 · first AC: 2024-02-23 · C++20 (GCC 11-64) (first AC) · Tags: greedy, implementation

[Zachary_Gao's solution](#)

25.

1748A

[The Ultimate Square](#) · [Tutorial](#)

Quality: 25,313 global accepts · Rating: 800 · first AC: 2022-11-12 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: math

[Zachary_Gao's solution](#)

26.

1818A

[Politics](#) · [Tutorial](#)

Quality: 14,387 global accepts · Rating: 800 · first AC: 2023-05-02 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: greedy, implementation

[Zachary_Gao's solution](#)

27.

1832A

[New Palindrome](#) · [Tutorial](#)

Quality: 28,971 global accepts · Rating: 800 · first AC: 2023-05-14 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: strings

[Zachary_Gao's solution](#)

28.

1856A

[Tales of a Sort](#) · [Tutorial](#)

Quality: 28,161 global accepts · Rating: 800 · first AC: 2023-08-05 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: implementation

[Zachary_Gao's solution](#)

29.

1864A

[Increasing and Decreasing](#) · [Tutorial](#)

Quality: 21,419 global accepts · Rating: 800 · first AC: 2023-08-27 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, greedy, implementation, math

[Zachary_Gao's solution](#)

30.

1870A

[MEXanized Array](#) · [Tutorial](#)

Quality: 20,232 global accepts · Rating: 800 · first AC: 2023-09-18 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, greedy, math

[Zachary_Gao's solution](#)

31.

1916A

[2023](#) · [Tutorial](#)

Quality: 28,312 global accepts · Rating: 800 · first AC: 2023-12-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, implementation, math, number theory

[Zachary_Gao's solution](#)

32.

1920A

[Satisfying Constraints](#) · [Tutorial](#)

Quality: 29,556 global accepts · Rating: 800 · first AC: 2024-01-13 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: brute force, greedy, math

[Zachary_Gao's solution](#)

33.

1918A

[Brick Wall](#) · [Tutorial](#)

Quality: 32,372 global accepts · Rating: 800 · first AC: 2024-01-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, greedy, implementation, math

[Zachary_Gao's solution](#)

34.

1925A

[We Got Everything Covered!](#) · [Tutorial](#)

Quality: 31,147 global accepts · Rating: 800 · first AC: 2024-01-27 · last AC: 2024-01-31 · C++17 (GCC 9-64) (first AC) · Tags: constructive algorithms, greedy, strings

[Zachary_Gao's solution](#)

35.

1919B

[Plus-Minus Split](#) · [Tutorial](#)

Quality: 31,652 global accepts · Rating: 800 · first AC: 2024-01-06 · last AC: 2024-01-07 · C++20 (GCC 11-64) (first AC) · Tags: greedy

[Zachary_Gao's solution](#)

36.

1919A

[Wallet Exchange](#) · [Tutorial](#)

Quality: 36,195 global accepts · Rating: 800 · first AC: 2024-01-06 · last AC: 2024-01-07 · C++20 (GCC 11-64) (first AC) · Tags: games, math

[Zachary_Gao's solution](#)

37.

1917A

[Least Product](#) · [Tutorial](#)

Quality: 27,245 global accepts · Rating: 800 · first AC: 2023-12-24 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: constructive algorithms, math

[Zachary_Gao's solution](#)

38.

1909A

[Distinct Buttons](#) · [Tutorial](#)

Quality: 18,929 global accepts · Rating: 800 · first AC: 2023-12-23 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

39.

1902A

[Binary Imbalance](#) · [Tutorial](#)

Quality: 23,256 global accepts · Rating: 800 · first AC: 2023-12-03 · last AC: 2023-12-11 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms

[Zachary_Gao's solution](#)

40.

1879A

[Rigged!](#) · [Tutorial](#)

Quality: 24,518 global accepts · Rating: 800 · first AC: 2023-09-25 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: greedy

[Zachary_Gao's solution](#)

41.

1866A

[Ambitious Kid](#) · [Tutorial](#)

Quality: 51,346 global accepts · Rating: 800 · first AC: 2023-09-03 · last AC: 2023-09-15 · C++14 (GCC 6-32) (first AC) · Tags: math

[Zachary_Gao's solution](#)

42.

1767B

[Block Towers](#) · [Tutorial](#)

Quality: 21,935 global accepts · Rating: 800 · first AC: 2022-12-16 · last AC: 2023-04-29 · C++14 (GCC 6-32) (first AC) · Tags: data structures, greedy, sortings

[Zachary_Gao's solution](#)

43.

1811A

[Insert Digit](#) · [Tutorial](#)

Quality: 34,625 global accepts · Rating: 800 · first AC: 2023-04-08 · last AC: 2023-04-08 · C++14 (GCC 6-32) (first AC) · Tags: greedy, math, strings

[Zachary_Gao's solution](#)

44.

1806A

[Walking Master](#) · [Tutorial](#)

Quality: 43,455 global accepts · Rating: 800 · first AC: 2023-03-18 · last AC: 2023-03-19 · C++14 (GCC 6-32) (first AC) · Tags: geometry, greedy, math

[Zachary_Gao's solution](#)

45.

1767A

[Cut the Triangle](#) · [Tutorial](#)

Quality: 21,557 global accepts · Rating: 800 · first AC: 2022-12-16 · C++14 (GCC 6-32) (first AC) · Tags: implementation

[Zachary_Gao's solution](#)

46.

2178B

[Impost or Sus](#) · [Tutorial](#)

Quality: 21,584 global accepts · Rating: 900 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy, implementation, strings

[Zachary_Gao's solution](#)

47.

2157B

[Expansion Plan 2](#) · [Tutorial](#)

Quality: 12,865 global accepts · Rating: 900 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

48.

2048B

[Kevin and Permutation](#) · [Tutorial](#)

Quality: 20,650 global accepts · Rating: 900 · first AC: 2024-12-19 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

49.

2031B

[Penchick and Satay Sticks](#) · [Tutorial](#)

Quality: 20,784 global accepts · Rating: 900 · first AC: 2024-11-15 · C++17 (GCC 7-32) (first AC) · Tags: brute force, greedy, sortings

[Zachary_Gao's solution](#)

50.

2035B

[Everyone Loves Tres](#) · [Tutorial](#)

Quality: 20,572 global accepts · Rating: 900 · first AC: 2024-10-27 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, math, number theory

[Zachary_Gao's solution](#)

51.

1973A

[Chess For Three](#) · [Tutorial](#)

Quality: 28,538 global accepts · Rating: 900 · first AC: 2024-05-18 · C++20 (GCC 13-64) (first AC) · Tags: brute force, dp, implementation, math

[Zachary_Gao's solution](#)

52.

1951A

[Dual Trigger](#) · [Tutorial](#)

Quality: 22,572 global accepts · Rating: 900 · first AC: 2024-04-06 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, math

[Zachary_Gao's solution](#)

53.

1818B

[Indivisible](#) · [Tutorial](#)

Quality: 17,051 global accepts · Rating: 900 · first AC: 2023-05-02 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms

[Zachary_Gao's solution](#)

54.

1856B

[Good Arrays](#) · [Tutorial](#)

Quality: 27,451 global accepts · Rating: 900 · first AC: 2023-08-05 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

55.

1904A

[Forked!](#) · [Tutorial](#)

Quality: 40,379 global accepts · Rating: 900 · first AC: 2023-12-11 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: brute force, implementation

[Zachary_Gao's solution](#)

56.

1918B

[Minimize Inversions](#) · [Tutorial](#)

Quality: 27,023 global accepts · Rating: 900 · first AC: 2024-01-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, data structures, greedy, implementation, sortings

[Zachary_Gao's solution](#)

57.

1879B

[Chips on the Board](#) · [Tutorial](#)

Quality: 25,077 global accepts · Rating: 900 · first AC: 2023-09-25 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

58.

1875A

[Jellyfish and Undertale](#) · [Tutorial](#)

Quality: 46,997 global accepts · Rating: 900 · first AC: 2023-10-01 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: brute force, greedy

[Zachary_Gao's solution](#)

59.

1806B

[Mex Master](#) · [Tutorial](#)

Quality: 19,738 global accepts · Rating: 900 · first AC: 2023-03-19 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

60.

2164B

[Even Modulo Pair](#) · [Tutorial](#)

Quality: 18,251 global accepts · Rating: 1000 · first AC: 2025-11-06 · C++20 (GCC 13-64) (first AC) · Tags: brute force, math, number theory

[Zachary_Gao's solution](#)

61.

2039B

[Shohag Loves Strings](#) · [Tutorial](#)

Quality: 17,297 global accepts · Rating: 1000 · first AC: 2024-11-23 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, greedy, implementation, strings

[Zachary_Gao's solution](#)

62.

1987B

[K-Sort](#) · [Tutorial](#)

Quality: 23,913 global accepts · Rating: 1000 · first AC: 2024-06-30 · C++20 (GCC 13-64) (first AC) · Tags: greedy

[Zachary_Gao's solution](#)

63.

1916B

[Two Divisors](#) · [Tutorial](#)

Quality: 31,909 global accepts · Rating: 1000 · first AC: 2023-12-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, math, number theory

[Zachary_Gao's solution](#)

64.

1811B

[Conveyor Belts](#) · [Tutorial](#)

Quality: 22,332 global accepts · Rating: 1000 · first AC: 2023-04-08 · last AC: 2023-04-08 · C++14 (GCC 6-32) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

65.

1800C1

[Powering the Hero \(easy version\)](#) · [Tutorial](#)

Quality: 26,957 global accepts · Rating: 1000 · first AC: 2023-03-19 · C++14 (GCC 6-32) (first AC) · Tags: data structures, greedy

[Zachary_Gao's solution](#)

66.

1800B

[Count the Number of Pairs](#) · [Tutorial](#)

Quality: 28,412 global accepts · Rating: 1000 · first AC: 2023-03-18 · C++14 (GCC 6-32) (first AC) · Tags: greedy, strings

[Zachary_Gao's solution](#)

67.

2183B

[Yet Another MEX Problem](#) · [Tutorial](#)

Quality: 16,174 global accepts · Rating: 1100 · first AC: 2026-01-07 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

68.

2107B

[Apples in Boxes](#) · [Tutorial](#)

Quality: 19,803 global accepts · Rating: 1100 · first AC: 2025-05-06 · C++17 (GCC 7-32) (first AC) · Tags: games, greedy, math

[Zachary_Gao's solution](#)

69.

1984B

[Large Addition](#) · [Tutorial](#)

Quality: 20,954 global accepts · Rating: 1100 · first AC: 2024-06-09 · C++17 (GCC 7-32) (first AC) · Tags: implementation, math

[Zachary_Gao's solution](#)

70.

1957B

[A BIT of a Construction](#) · [Tutorial](#)

Quality: 20,411 global accepts · Rating: 1100 · first AC: 2024-04-21 · last AC: 2024-04-24 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, constructive algorithms, greedy, implementation

[Zachary_Gao's solution](#)

71.

1942B

[Bessie and MEX](#) · [Tutorial](#)

Quality: 15,499 global accepts · Rating: 1100 · first AC: 2024-03-30 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, math

[Zachary_Gao's solution](#)

72.

1923B

[Monsters Attack!](#) · [Tutorial](#)

Quality: 19,880 global accepts · Rating: 1100 · first AC: 2024-02-23 · C++20 (GCC 11-64) (first AC) · Tags: dp, greedy, implementation

[Zachary_Gao's solution](#)

73.

1832B

[Maximum Sum](#) · [Tutorial](#)

Quality: 35,492 global accepts · Rating: 1100 · first AC: 2023-05-14 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: brute force, sortings, two pointers

[Zachary_Gao's solution](#)

74.

1904B

[Collecting Game](#) · [Tutorial](#)

Quality: 27,917 global accepts · Rating: 1100 · first AC: 2023-12-11 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: binary search, dp, greedy, sortings, two pointers

[Zachary_Gao's solution](#)

75.

1920B

[Summation Game](#) · [Tutorial](#)

Quality: 23,123 global accepts · Rating: 1100 · first AC: 2024-01-13 · last AC: 2024-02-06 · C++17 (GCC 9-64) (first AC) · Tags: games, greedy, math, sortings

[Zachary_Gao's solution](#)

76.

1917B

[Erase First or Second Letter](#) · [Tutorial](#)

Quality: 36,356 global accepts · Rating: 1100 · first AC: 2023-12-24 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: brute force, combinatorics, data structures, dp, strings

[Zachary_Gao's solution](#)

77.

1902B

[Getting Points](#) · [Tutorial](#)

Quality: 16,450 global accepts · Rating: 1100 · first AC: 2023-12-03 · last AC: 2023-12-11 · C++20 (GCC 11-64) (first AC) · Tags: binary search, brute force, greedy

[Zachary_Gao's solution](#)

78.

1811C

[Restore the Array](#) · [Tutorial](#)

Quality: 22,227 global accepts · Rating: 1100 · first AC: 2023-04-08 · last AC: 2023-04-08 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

79.

1800C2

[Powering the Hero \(hard version\)](#) · [Tutorial](#)

Quality: 27,088 global accepts · Rating: 1100 · first AC: 2023-03-18 · last AC: 2023-03-19 · C++14 (GCC 6-32) (first AC) · Tags: data structures, greedy

[Zachary_Gao's solution](#)

80.

2190A

[Sorting Game](#) · [Tutorial](#)

Quality: 17,135 global accepts · Rating: 1200 · first AC: 2026-01-17 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, games, greedy

[Zachary_Gao's solution](#)

81.

2178C

[First or Second](#) · [Tutorial](#)

Quality: 15,698 global accepts · Rating: 1200 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy, implementation

[Zachary_Gao's solution](#)

82.

2174A

[Needle in a Haystack](#) · [Tutorial](#)

Quality: 14,302 global accepts · Rating: 1200 · first AC: 2025-12-06 · C++20 (GCC 13-64) (first AC) · Tags: greedy, strings, two pointers

[Zachary_Gao's solution](#)

83.

2161C

[Loyalty](#) · [Tutorial](#)

Quality: 12,554 global accepts · Rating: 1200 · first AC: 2025-10-31 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, sortings, two pointers

[Zachary_Gao's solution](#)

84.

2135A

[Against the Difference](#) · [Tutorial](#)

Quality: 18,333 global accepts · Rating: 1200 · first AC: 2025-08-28 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, dp

[Zachary_Gao's solution](#)

85.

2053B

[Outstanding Impressionist](#) · [Tutorial](#)

Quality: 16,977 global accepts · Rating: 1200 · first AC: 2024-12-28 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, data structures, greedy

[Zachary_Gao's solution](#)

86.

2048C

[Kevin and Binary Strings](#) · [Tutorial](#)

Quality: 15,144 global accepts · Rating: 1200 · first AC: 2024-12-19 · C++17 (GCC 7-32) (first AC) · Tags: bitmasks, brute force, greedy, implementation, strings

[Zachary_Gao's solution](#)

87.

2046A

[Swap Columns and Find a Path](#) · [Tutorial](#)

Quality: 16,808 global accepts · Rating: 1200 · first AC: 2024-12-03 · C++20 (GCC 13-64) (first AC) · Tags: greedy, sortings

[Zachary_Gao's solution](#)

88.

2039C1

[Shohag Loves XOR \(Easy Version\)](#) · [Tutorial](#)

Quality: 13,520 global accepts · Rating: 1200 · first AC: 2024-11-23 · C++17 (GCC 7-32) (first AC) · Tags: bitmasks, brute force, math, number theory

[Zachary_Gao's solution](#)

89.

1987C

[Basil's Garden](#) · [Tutorial](#)

Quality: 20,764 global accepts · Rating: 1200 · first AC: 2024-06-30 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy

[Zachary_Gao's solution](#)

90.

1951B

[Battle Cows](#) · [Tutorial](#)

Quality: 16,849 global accepts · Rating: 1200 · first AC: 2024-04-06 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, greedy

[Zachary_Gao's solution](#)

91.

1935B

[Informatics in MAC](#) · [Tutorial](#)

Quality: 20,895 global accepts · Rating: 1200 · first AC: 2024-03-05 · last AC: 2024-03-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms

[Zachary_Gao's solution](#)

92.

1832C

[Contrast Value](#) · [Tutorial](#)

Quality: 34,394 global accepts · Rating: 1200 · first AC: 2023-05-14 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: greedy, implementation

[Zachary_Gao's solution](#)

93.

1870B

[Friendly Arrays](#) · [Tutorial](#)

Quality: 16,108 global accepts · Rating: 1200 · first AC: 2023-09-18 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, greedy, math

[Zachary_Gao's solution](#)

94.

1916C

[Training Before the Olympiad](#) · [Tutorial](#)

Quality: 19,883 global accepts · Rating: 1200 · first AC: 2023-12-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, games, greedy, implementation, math

[Zachary_Gao's solution](#)

95.

1925B

[A Balanced Problemset?](#) · [Tutorial](#)

Quality: 23,129 global accepts · Rating: 1200 · first AC: 2024-01-27 · last AC: 2024-01-31 · C++17 (GCC 9-64) (first AC) · Tags: brute force, greedy, math, number theory

[Zachary_Gao's solution](#)

96.

1909B

[Make Almost Equal With Mod](#) · [Tutorial](#)

Quality: 30,965 global accepts · Rating: 1200 · first AC: 2023-12-23 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: bitmasks, constructive algorithms, math, number theory

[Zachary_Gao's solution](#)

97.

1874A

[Jellyfish and Game](#) · [Tutorial](#)

Quality: 19,387 global accepts · Rating: 1200 · first AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: brute force, games, greedy, implementation

[Zachary_Gao's solution](#)

98.

1875B

[Jellyfish and Game](#) · [Tutorial](#)

Rating: 1200 · first AC: 2023-10-01 · C++20 (GCC 11-64) (first AC) · Tags: brute force, greedy, implementation

[Zachary_Gao's solution](#)

99.

1800D

[Remove Two Letters](#) · [Tutorial](#)

Quality: 29,346 global accepts · Rating: 1200 · first AC: 2023-03-18 · last AC: 2023-03-19 · C++14 (GCC 6-32) (first AC) · Tags: data structures, greedy, hashing, strings

[Zachary_Gao's solution](#)

100.

2165A

[Cyclic Merging](#) · [Tutorial](#)

Quality: 14,111 global accepts · Rating: 1300 · first AC: 2025-11-16 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

101.

2152B

[Catching the Krug](#) · [Tutorial](#)

Quality: 12,853 global accepts · Rating: 1300 · first AC: 2025-10-03 · C++23 (GCC 14-64, msys2) (first AC) · Tags: games

[Zachary_Gao's solution](#)

102.

2127B

[Hamiid, Haaamid... Hamid?](#) · [Tutorial](#)

Quality: 13,493 global accepts · Rating: 1300 · first AC: 2025-08-07 · C++23 (GCC 14-64, msys2) (first AC) · Tags: games, greedy

[Zachary_Gao's solution](#)

103.

2129A

[Double Perspective](#) · [Tutorial](#)

Quality: 16,640 global accepts · Rating: 1300 · first AC: 2025-07-31 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dp, dsu, graphs, greedy, sortings

[Zachary_Gao's solution](#)

104.

2101A

[Mex in the Grid](#) · [Tutorial](#)

Quality: 13,428 global accepts · Rating: 1300 · first AC: 2025-05-11 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, implementation

[Zachary_Gao's solution](#)

105.

2031C

[Penchick and BBQ Buns](#) · [Tutorial](#)

Quality: 15,715 global accepts · Rating: 1300 · first AC: 2024-11-15 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, math, number theory

[Zachary_Gao's solution](#)

106.

2023A

[Concatenation of Arrays](#) · [Tutorial](#)

Quality: 16,569 global accepts · Rating: 1300 · first AC: 2024-10-20 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, math, sortings

[Zachary_Gao's solution](#)

107.

1984C1

[Magnitude \(Easy Version\)](#) · [Tutorial](#)

Quality: 20,153 global accepts · Rating: 1300 · first AC: 2024-06-09 · C++17 (GCC 7-32) (first AC) · Tags: dp, greedy, math

[Zachary_Gao's solution](#)

108.

1981B

[Turtle and an Infinite Sequence](#) · [Tutorial](#)

Quality: 16,435 global accepts · Rating: 1300 · first AC: 2024-05-31 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, math

[Zachary_Gao's solution](#)

109.

1973B

[Cat, Fox and the Lonely Array](#) · [Tutorial](#)

Quality: 16,828 global accepts · Rating: 1300 · first AC: 2024-05-18 · C++20 (GCC 13-64) (first AC) · Tags: binary search, bitmasks, data structures, greedy, math, two pointers

[Zachary_Gao's solution](#)

110.

1942C1

[Bessie's Birthday Cake \(Easy Version\)](#) · [Tutorial](#)

Quality: 12,423 global accepts · Rating: 1300 · first AC: 2024-03-30 · C++17 (GCC 7-32) (first AC) · Tags: geometry, greedy, math

[Zachary_Gao's solution](#)

111.

1943A

[MEX Game 1](#) · [Tutorial](#)

Quality: 21,480 global accepts · Rating: 1300 · first AC: 2024-03-16 · last AC: 2024-03-26 · C++17 (GCC 7-32) (first AC) · Tags: games, greedy

[Zachary_Gao's solution](#)

112.

1870C

[Colorful Table](#) · [Tutorial](#)

Quality: 13,114 global accepts · Rating: 1300 · first AC: 2023-09-18 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: binary search, data structures, dp, implementation, math, two pointers

[Zachary_Gao's solution](#)

113.

1902C

[Insert and Equalize](#) · [Tutorial](#)

Quality: 16,976 global accepts · Rating: 1300 · first AC: 2023-12-03 · last AC: 2023-12-11 · C++20 (GCC 11-64) (first AC) · Tags: brute force, constructive algorithms, greedy, math, number theory

[Zachary_Gao's solution](#)

114.

1879C

[Make it Alternating](#) · [Tutorial](#)

Quality: 27,114 global accepts · Rating: 1300 · first AC: 2023-09-25 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, dp, greedy

[Zachary_Gao's solution](#)

115.

1766C

[Hamiltonian Wall](#) · [Tutorial](#)

Quality: 14,991 global accepts · Rating: 1300 · first AC: 2023-04-29 · last AC: 2023-04-29 · C++14 (GCC 6-32) (first AC) · Tags: dp, implementation

[Zachary_Gao's solution](#)

116.

2190B1

[Sub-RBS \(Easy Version\)](#) · [Tutorial](#)

Quality: 10,673 global accepts · Rating: 1400 · first AC: 2026-01-17 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, constructive algorithms, dp, greedy, strings, two pointers

[Zachary_Gao's solution](#)

117.

2157C

[Meximum Array 2](#) · [Tutorial](#)

Quality: 9,247 global accepts · Rating: 1400 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, implementation, math

[Zachary_Gao's solution](#)

118.

2164C

[Dungeon](#) · [Tutorial](#)

Quality: 10,703 global accepts · Rating: 1400 · first AC: 2025-11-06 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, data structures, greedy, sortings

[Zachary_Gao's solution](#)

119.

2152C

[Triple Removal](#) · [Tutorial](#)

Quality: 12,220 global accepts · Rating: 1400 · first AC: 2025-10-03 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, greedy, math

[Zachary_Gao's solution](#)

120.

2127C

[Trip Shopping](#) · [Tutorial](#)

Quality: 12,383 global accepts · Rating: 1400 · first AC: 2025-08-07 · C++23 (GCC 14-64, msys2) (first AC) · Tags: games, greedy, sortings

[Zachary_Gao's solution](#)

121.

2097A

[Sports Betting](#) · [Tutorial](#)

Quality: 8,585 global accepts · Rating: 1400 · first AC: 2025-04-26 · C++23 (GCC 14-64, msys2) (first AC) · Tags: 2-sat, brute force, math, sortings

[Zachary_Gao's solution](#)

122.

2035C

[Alya and Permutation](#) · [Tutorial](#)

Quality: 11,529 global accepts · Rating: 1400 · first AC: 2024-10-27 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, constructive algorithms, math

[Zachary_Gao's solution](#)

123.

1951C

[Ticket Hoarding](#) · [Tutorial](#)

Quality: 13,772 global accepts · Rating: 1400 · first AC: 2024-04-06 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: greedy, math, sortings

[Zachary_Gao's solution](#)

124.

1923C

[Find B](#) · [Tutorial](#)

Quality: 18,454 global accepts · Rating: 1400 · first AC: 2024-02-23 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, greedy

[Zachary_Gao's solution](#)

125.

1904C

[Array Game](#) · [Tutorial](#)

Quality: 23,544 global accepts · Rating: 1400 · first AC: 2023-12-11 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: binary search, brute force, data structures, sortings, two pointers

[Zachary_Gao's solution](#)

126.

1918C

[XOR-distance](#) · [Tutorial](#)

Quality: 16,663 global accepts · Rating: 1400 · first AC: 2024-01-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, greedy, implementation, math

[Zachary_Gao's solution](#)

127.

1919C

[Grouping Increases](#) · [Tutorial](#)

Quality: 28,579 global accepts · Rating: 1400 · first AC: 2024-01-06 · last AC: 2024-01-07 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, greedy

[Zachary_Gao's solution](#)

128.

1909C

[Heavy Intervals](#) · [Tutorial](#)

Quality: 13,163 global accepts · Rating: 1400 · first AC: 2023-12-23 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: constructive algorithms, data structures, dsu, greedy, math, sortings

[Zachary_Gao's solution](#)

129.

1875C

[Jellyfish and Green Apple](#) · [Tutorial](#)

Quality: 13,880 global accepts · Rating: 1400 · first AC: 2023-10-01 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, greedy, math, number theory

[Zachary_Gao's solution](#)

130.

1866B

[Battling with Numbers](#) · [Tutorial](#)

Quality: 9,180 global accepts · Rating: 1400 · first AC: 2023-09-03 · last AC: 2023-09-15 · C++14 (GCC 6-32) (first AC) · Tags: combinatorics,

math, number theory

[Zachary_Gao's solution](#)

131.

414B

[Mashmikh and ACM](#) · [Tutorial](#)

Quality: 29,181 global accepts · Rating: 1400 · first AC: 2022-12-14 · C++14 (GCC 6-32) (first AC) · Tags: combinatorics, dp, number theory

[Zachary_Gao's solution](#)

132.

2183D1

[Tree Coloring \(Easy Version\)](#) · [Tutorial](#)

Quality: 8,855 global accepts · Rating: 1500 · first AC: 2026-01-07 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dfs and similar, greedy, trees

[Zachary_Gao's solution](#)

133.

2183C

[War Strategy](#) · [Tutorial](#)

Quality: 10,669 global accepts · Rating: 1500 · first AC: 2026-01-07 · C++20 (GCC 13-64) (first AC) · Tags: binary search, greedy, math, two pointers

[Zachary_Gao's solution](#)

134.

2115A

[Gellyfish and Flaming Peony](#) · [Tutorial](#)

Quality: 14,954 global accepts · Rating: 1500 · first AC: 2025-06-01 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dp, math, number theory

[Zachary_Gao's solution](#)

135.

2107C

[Maximum Subarray Sum](#) · [Tutorial](#)

Quality: 12,095 global accepts · Rating: 1500 · first AC: 2025-05-06 · C++17 (GCC 7-32) (first AC) · Tags: binary search, constructive algorithms, dp, implementation, math

[Zachary_Gao's solution](#)

136.

2053C

[Bewitching Stargazer](#) · [Tutorial](#)

Quality: 12,333 global accepts · Rating: 1500 · first AC: 2024-12-28 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, divide and conquer, dp, math

[Zachary_Gao's solution](#)

137.

1924A

[Did We Get Everything Covered?](#) · [Tutorial](#)

Quality: 16,751 global accepts · Rating: 1500 · first AC: 2024-01-31 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, dp, greedy, shortest paths, strings

[Zachary_Gao's solution](#)

138.

1925C

[Did We Get Everything Covered?](#) · [Tutorial](#)

Rating: 1500 · first AC: 2024-01-27 · C++17 (GCC 9-64) (first AC) · Tags: constructive algorithms, dp, greedy, implementation, strings

[Zachary_Gao's solution](#)

139.

1767D

[Playoff](#) · [Tutorial](#)

Quality: 11,204 global accepts · Rating: 1500 · first AC: 2023-04-29 · last AC: 2023-04-29 · C++14 (GCC 6-32) (first AC) · Tags: combinatorics, constructive algorithms, dp, greedy, math

[Zachary_Gao's solution](#)

140.

1811E

[Living Sequence](#) · [Tutorial](#)

Quality: 14,408 global accepts · Rating: 1500 · first AC: 2023-04-08 · last AC: 2023-04-08 · C++14 (GCC 6-32) (first AC) · Tags: binary search, dp, math, number theory

[Zachary Gao's solution](#)

141.

2157D

[Billion Players Game](#) · [Tutorial](#)

Quality: 6,005 global accepts · Rating: 1600 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: binary search, greedy, math, sortings, ternary search, two pointers

[Zachary Gao's solution](#)

142.

2129B

[Stay or Mirror](#) · [Tutorial](#)

Quality: 13,262 global accepts · Rating: 1600 · first AC: 2025-07-31 · C++20 (GCC 13-64) (first AC) · Tags: brute force, data structures, dp, greedy, sortings

[Zachary Gao's solution](#)

143.

2048D

[Kevin and Competition Memories](#) · [Tutorial](#)

Quality: 8,310 global accepts · Rating: 1600 · first AC: 2024-12-19 · C++17 (GCC 7-32) (first AC) · Tags: binary search, brute force, data structures, greedy, sortings, two pointers

[Zachary Gao's solution](#)

144.

2046B

[Move Back at a Cost](#) · [Tutorial](#)

Quality: 10,868 global accepts · Rating: 1600 · first AC: 2024-12-03 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, greedy, sortings

[Zachary Gao's solution](#)

145.

1957C

[How Does the Rook Move?](#) · [Tutorial](#)

Quality: 11,937 global accepts · Rating: 1600 · first AC: 2024-04-21 · last AC: 2024-04-24 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math

[Zachary Gao's solution](#)

146.

1956C

[Nene's Magical Matrix](#) · [Tutorial](#)

Quality: 15,148 global accepts · Rating: 1600 · first AC: 2024-04-13 · last AC: 2024-04-14 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, math

[Zachary Gao's solution](#)

147.

1904D1

[Set To Max \(Easy Version\)](#) · [Tutorial](#)

Quality: 8,621 global accepts · Rating: 1600 · first AC: 2023-12-11 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: brute force, constructive algorithms, greedy

[Zachary Gao's solution](#)

148.

1920C

[Partitioning the Array](#) · [Tutorial](#)

Quality: 19,919 global accepts · Rating: 1600 · first AC: 2024-01-13 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: brute force, math, number theory

[Zachary Gao's solution](#)

149.

1917C

[Watering an Array](#) · [Tutorial](#)

Quality: 12,386 global accepts · Rating: 1600 · first AC: 2023-12-25 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: brute force, greedy, implementation, math

[Zachary Gao's solution](#)

150.

1875D

[Jellyfish and Mex](#) · [Tutorial](#)

Quality: 11,405 global accepts · Rating: 1600 · first AC: 2023-10-04 · last AC: 2023-10-04 · C++20 (GCC 11-64) (first AC) · Tags: dp

[Zachary_Gao's solution](#)

151.

1766D

[Lucky Chains](#) · [Tutorial](#)

Quality: 10,547 global accepts · Rating: 1600 · first AC: 2023-04-29 · last AC: 2023-04-29 · C++14 (GCC 6-32) (first AC) · Tags: math, number theory

[Zachary_Gao's solution](#)

152.

1811D

[Umka and a Long Flight](#) · [Tutorial](#)

Quality: 8,639 global accepts · Rating: 1600 · first AC: 2023-04-08 · last AC: 2023-04-08 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, implementation, math

[Zachary_Gao's solution](#)

153.

2178D

[Xmas or Hysteria](#) · [Tutorial](#)

Quality: 6,697 global accepts · Rating: 1700 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, implementation, math

[Zachary_Gao's solution](#)

154.

2161B

[Make Connected](#) · [Tutorial](#)

Quality: 5,372 global accepts · Rating: 1700 · first AC: 2025-10-31 · C++20 (GCC 13-64) (first AC) · Tags: brute force, implementation

[Zachary_Gao's solution](#)

155.

1896D

[Ones and Twos](#) · [Tutorial](#)

Quality: 7,006 global accepts · Rating: 1700 · first AC: 2023-12-06 · last AC: 2025-10-13 · C++20 (GCC 11-64) (first AC) · Tags: binary search, data structures, divide and conquer, math, two pointers

[Zachary_Gao's solution](#)

156.

2159A

[MAD Interactive Problem](#) · [Tutorial](#)

Quality: 8,131 global accepts · Rating: 1700 · first AC: 2025-10-12 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, implementation, interactive

[Zachary_Gao's solution](#)

157.

2152D

[Division Versus Addition](#) · [Tutorial](#)

Quality: 6,748 global accepts · Rating: 1700 · first AC: 2025-10-03 · C++20 (GCC 13-64) (first AC) · Tags: games, greedy, math

[Zachary_Gao's solution](#)

158.

2135B

[For the Champion](#) · [Tutorial](#)

Quality: 7,340 global accepts · Rating: 1700 · first AC: 2025-08-28 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, interactive, math

[Zachary_Gao's solution](#)

159.

2053D

[Refined Product Optimality](#) · [Tutorial](#)

Quality: 7,685 global accepts · Rating: 1700 · first AC: 2024-12-28 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, greedy, math, schedules, sortings

[Zachary_Gao's solution](#)

160.

2039D

[Shohag Loves GCD](#) · [Tutorial](#)

Quality: 6,969 global accepts · Rating: 1700 · first AC: 2024-11-23 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, greedy, math, number theory

[Zachary_Gao's solution](#)

161.

2031D

[Penchick and Desert Rabbit](#) · [Tutorial](#)

Quality: 9,677 global accepts · Rating: 1700 · first AC: 2024-11-15 · C++17 (GCC 7-32) (first AC) · Tags: binary search, data structures, dfs and similar, dp, dsu, greedy, implementation, two pointers

[Zachary_Gao's solution](#)

162.

2023B

[Skipping](#) · [Tutorial](#)

Quality: 7,080 global accepts · Rating: 1700 · first AC: 2024-10-20 · C++20 (GCC 13-64) (first AC) · Tags: binary search, dp, graphs, shortest paths

[Zachary_Gao's solution](#)

163.

1984C2

[Magnitude \(Hard Version\)](#) · [Tutorial](#)

Quality: 8,691 global accepts · Rating: 1700 · first AC: 2024-06-09 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, greedy, math

[Zachary_Gao's solution](#)

164.

1973C

[Cat, Fox and Double Maximum](#) · [Tutorial](#)

Quality: 9,851 global accepts · Rating: 1700 · first AC: 2024-05-18 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, implementation, math, sortings

[Zachary_Gao's solution](#)

165.

813C

[The Tag Game](#) · [Tutorial](#)

Quality: 8,140 global accepts · Rating: 1700 · first AC: 2024-04-10 · C++20 (GCC 13-64) (first AC) · Tags: dfs and similar, graphs

[Zachary_Gao's solution](#)

166.

1942C2

[Bessie's Birthday Cake \(Hard Version\)](#) · [Tutorial](#)

Quality: 6,874 global accepts · Rating: 1700 · first AC: 2024-03-30 · C++17 (GCC 7-32) (first AC) · Tags: geometry, greedy, math

[Zachary_Gao's solution](#)

167.

1936A

[Bitwise Operation Wizard](#) · [Tutorial](#)

Quality: 8,660 global accepts · Rating: 1700 · first AC: 2024-02-29 · last AC: 2024-03-01 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, constructive algorithms, greedy, interactive, math

[Zachary_Gao's solution](#)

168.

1916D

[Mathematical Problem](#) · [Tutorial](#)

Quality: 9,774 global accepts · Rating: 1700 · first AC: 2023-12-30 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: brute force, constructive algorithms, geometry, math

[Zachary_Gao's solution](#)

169.

1901D

[Yet Another Monster Fight](#) · [Tutorial](#)

Quality: 8,593 global accepts · Rating: 1700 · first AC: 2023-12-08 · last AC: 2023-12-12 · C++14 (GCC 6-32) (first AC) · Tags: binary search, dp, greedy, implementation, math

[Zachary_Gao's solution](#)

170.

1903D1

[Maximum And Queries \(easy version\)](#) · [Tutorial](#)

Quality: 7,147 global accepts · Rating: 1700 · first AC: 2023-12-06 · last AC: 2023-12-06 · C++20 (GCC 11-64) (first AC) · Tags: binary search, bitmasks, brute force, greedy

[Zachary_Gao's solution](#)

171.

1497E1

[Square-Free Division \(easy version\)](#) · [Tutorial](#)

Quality: 9,112 global accepts · Rating: 1700 · first AC: 2023-11-27 · last AC: 2023-11-27 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, greedy, math, number theory, two pointers

[Zachary_Gao's solution](#)

172.

1879D

[Sum of XOR Functions](#) · [Tutorial](#)

Quality: 10,489 global accepts · Rating: 1700 · first AC: 2023-09-25 · last AC: 2023-10-03 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, combinatorics, divide and conquer, dp, math

[Zachary_Gao's solution](#)

173.

269B

[Greenhouse Effect](#) · [Tutorial](#)

Quality: 6,991 global accepts · Rating: 1700 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++14 (GCC 6-32) (first AC) · Tags: dp

[Zachary_Gao's solution](#)

174.

4D

[Mysterious Present](#) · [Tutorial](#)

Quality: 12,113 global accepts · Rating: 1700 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++14 (GCC 6-32) (first AC) · Tags: dp, sortings

[Zachary_Gao's solution](#)

175.

467C

[George and Job](#) · [Tutorial](#)

Quality: 16,582 global accepts · Rating: 1700 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++14 (GCC 6-32) (first AC) · Tags: dp, implementation

[Zachary_Gao's solution](#)

176.

1799C

[Double Lexicographically Minimum](#) · [Tutorial](#)

Quality: 6,922 global accepts · Rating: 1700 · first AC: 2023-09-01 · C++14 (GCC 6-32) (first AC) · Tags: greedy, strings

[Zachary_Gao's solution](#)

177.

1658C

[Shinju and the Lost Permutation](#) · [Tutorial](#)

Quality: 9,945 global accepts · Rating: 1700 · first AC: 2023-03-17 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, math

[Zachary_Gao's solution](#)

178.

2164D

[Copy String](#) · [Tutorial](#)

Quality: 4,964 global accepts · Rating: 1800 · first AC: 2025-11-06 · C++20 (GCC 13-64) (first AC) · Tags: greedy, implementation, strings, two pointers

[Zachary_Gao's solution](#)

179.

2127D

[Root was Built by Love, Broken by Destiny](#) · [Tutorial](#)

Quality: 6,186 global accepts · Rating: 1800 · first AC: 2025-08-07 · C++23 (GCC 14-64, msys2) (first AC) · Tags: combinatorics, dfs and similar, graphs, trees

[Zachary_Gao's solution](#)

180.

2101B

[Quartet Swapping](#) · [Tutorial](#)

Quality: 6,825 global accepts · Rating: 1800 · first AC: 2025-05-11 · C++20 (GCC 13-64) (first AC) · Tags: brute force, data structures, divide and conquer, greedy, sortings

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181.

2081A

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182.

161D

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183.

2039C2

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184.

2035D

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185.

1987D

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186.

1981C

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187.

1935C

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188.

1935D

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189.

1923D

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190.

1856E1

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191.

1904D2

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[Zachary_Gao's solution](#)

192.

73C

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193.

721C

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194.

1824B1

[LuoTianyi and the Floating Islands \(Easy Version\) · Tutorial](#)

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195.

1076D

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[Zachary_Gao's solution](#)

196.

1010C

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197.

687B

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198.

513G1

[Inversions problem · Tutorial](#)

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199.

1725M

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200.

234F

[Fence](#) · [Tutorial](#)

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201.

148D

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202.

2190B2

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203.

2180D

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204.

2180C

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205.

2174B

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206.

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207.

2165B

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208.

2129C1

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209.

2053E

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210.

1957D

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212.

1925D

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Quality: 4,776 global accepts · Rating: 1900 · first AC: 2024-01-27 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, dp, math, probabilities

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214.

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217.

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218.

479E

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1866C

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220.

1819B

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221.

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222.

208C

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1696D

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224.

1801C

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Quality: 4,102 global accepts · Rating: 1900 · first AC: 2023-05-06 · last AC: 2023-05-07 · C++14 (GCC 6-32) (first AC) · Tags: binary search, data structures, dp, greedy, sortings

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225.

2178E

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226.

432D

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227.

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228.

2135C

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229.

2129C2

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230.

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Quality: 3,501 global accepts · Rating: 2000 · first AC: 2024-12-19 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, graphs, greedy

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231.

388C

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232.

1987E

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233.

1984D

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234.

1951D

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235.

1951E

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236.

1956D

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237.

1943B

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238.

1936B

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Quality: 3,564 global accepts · Rating: 2000 · first AC: 2024-02-29 · last AC: 2024-03-01 · C++20 (GCC 11-64) (first AC) · Tags: binary search, data structures, implementation, math, two pointers

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239.

1923E

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240.

842C

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241.

1900D

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242.

522D

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243.

1903E

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1009E

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245.

999F

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246.

940E

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247.

1057C

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248.

629D

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249.

621E

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250.

449B

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251.

1131D

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252.

201C

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253.

1632D

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[Zachary_Gao's solution](#)

254.

1716D

[Chip Move](#) · [Tutorial](#)

Quality: 6,136 global accepts · Rating: 2000 · first AC: 2023-04-22 · C++14 (GCC 6-32) (first AC) · Tags: brute force, dp, math

[Zachary_Gao's solution](#)

255.

21B

[Intersection](#) · [Tutorial](#)

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[Zachary_Gao's solution](#)

256.

2183D2

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257.

2183E

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[Zachary_Gao's solution](#)

258.

2161D

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Quality: 2,773 global accepts · Rating: 2100 · first AC: 2025-10-31 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, dp, greedy

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259.

2159B

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260.

2152E

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261.

2135D1

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Quality: 2,436 global accepts · Rating: 2100 · first AC: 2025-08-28 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, interactive, math

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262.

2127E

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263.

2115B

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264.

2107D

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265.

2046C

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266.

1028D

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267.

702E

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268.

1538G

[Gift Set](#) · [Tutorial](#)

Quality: 5,214 global accepts · Rating: 2100 · first AC: 2024-11-21 · C++17 (GCC 7-32) (first AC) · Tags: binary search, greedy, math, ternary search

[Zachary_Gao's solution](#)

269.

1732C2

[Sheikh \(Hard Version\)](#) · [Tutorial](#)

Quality: 3,067 global accepts · Rating: 2100 · first AC: 2024-11-20 · C++17 (GCC 7-32) (first AC) · Tags: binary search, bitmasks, brute force, greedy, implementation, two pointers

[Zachary_Gao's solution](#)

270.

1790F

[Timofey and Black-White Tree](#) · [Tutorial](#)

Quality: 3,997 global accepts · Rating: 2100 · first AC: 2024-11-20 · last AC: 2024-11-20 · C++17 (GCC 7-32) (first AC) · Tags: brute force, dfs and similar, divide and conquer, graphs, greedy, math, shortest paths, trees

[Zachary_Gao's solution](#)

271.

1027E

[Inverse Coloring](#) · [Tutorial](#)

Quality: 2,362 global accepts · Rating: 2100 · first AC: 2024-11-18 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

272.

2031E

[Penchick and Chloe's Trees](#) · [Tutorial](#)

Quality: 2,691 global accepts · Rating: 2100 · first AC: 2024-11-15 · C++17 (GCC 7-32) (first AC) · Tags: data structures, dfs and similar, dp, greedy, implementation, math, sortings, trees

[Zachary_Gao's solution](#)

273.

1942D

[Learning to Paint](#) · [Tutorial](#)

Quality: 3,347 global accepts · Rating: 2100 · first AC: 2024-03-30 · C++17 (GCC 7-32) (first AC) · Tags: binary search, data structures, dfs and similar, dp, greedy, implementation, sortings

[Zachary_Gao's solution](#)

274.

1778D

[Flexible String Revisit](#) · [Tutorial](#)

Quality: 3,412 global accepts · Rating: 2100 · first AC: 2024-03-07 · last AC: 2024-03-07 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, dp, math, probabilities

[Zachary_Gao's solution](#)

275.

1761D

[Carry Bit](#) · [Tutorial](#)

Quality: 2,767 global accepts · Rating: 2100 · first AC: 2024-03-06 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, math

[Zachary_Gao's solution](#)

276.

1856D

[More Wrong](#) · [Tutorial](#)

Quality: 3,788 global accepts · Rating: 2100 · first AC: 2023-08-06 · last AC: 2024-02-06 · C++14 (GCC 6-32) (first AC) · Tags: divide and conquer, interactive

[Zachary_Gao's solution](#)

277.

1919D

[01 Tree](#) · [Tutorial](#)

Quality: 4,570 global accepts · Rating: 2100 · first AC: 2024-01-07 · last AC: 2024-01-07 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, data structures, dsu, greedy, sortings, trees

[Zachary_Gao's solution](#)

278.

1896E

[Permutation Sorting](#) · [Tutorial](#)

Quality: 2,744 global accepts · Rating: 2100 · first AC: 2023-12-07 · last AC: 2023-12-28 · C++14 (GCC 6-32) (first AC) · Tags: data structures, sortings

[Zachary_Gao's solution](#)

279.

1900E

[Transitive Graph](#) · [Tutorial](#)

Quality: 2,636 global accepts · Rating: 2100 · first AC: 2023-12-06 · last AC: 2023-12-12 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, dp, dsu, graphs, implementation

[Zachary_Gao's solution](#)

280.

703D

[Mishka and Interesting sum](#) · [Tutorial](#)

Quality: 4,063 global accepts · Rating: 2100 · first AC: 2023-11-08 · last AC: 2023-11-08 · C++14 (GCC 6-32) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

281.

1207F

[Remainder Problem](#) · [Tutorial](#)

Quality: 6,749 global accepts · Rating: 2100 · first AC: 2023-09-13 · last AC: 2023-09-15 · C++14 (GCC 6-32) (first AC) · Tags: brute force, data structures, implementation

[Zachary_Gao's solution](#)

282.

1799D2

[Hot Start Up \(hard version\)](#) · [Tutorial](#)

Quality: 3,062 global accepts · Rating: 2100 · first AC: 2023-09-01 · C++14 (GCC 6-32) (first AC) · Tags: data structures, dp

[Zachary_Gao's solution](#)

283.

1821E

[Rearrange Brackets](#) · [Tutorial](#)

Quality: 2,706 global accepts · Rating: 2100 · first AC: 2023-09-01 · last AC: 2023-09-01 · C++14 (GCC 6-32) (first AC) · Tags: brute force, dp, greedy, sortings, strings

[Zachary_Gao's solution](#)

284.

35E

[Parade](#) · [Tutorial](#)

Quality: 880 global accepts · Rating: 2100 · first AC: 2023-08-29 · last AC: 2023-08-29 · C++14 (GCC 6-32) (first AC) · Tags: data structures, sortings

[Zachary_Gao's solution](#)

285.

1284D

[New Year and Conference](#) · [Tutorial](#)

Quality: 3,397 global accepts · Rating: 2100 · first AC: 2023-07-09 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: binary search, data structures, hashing, sortings

[Zachary_Gao's solution](#)

286.

620E

[New Year Tree](#) · [Tutorial](#)

Quality: 7,088 global accepts · Rating: 2100 · first AC: 2023-07-09 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, data structures, trees

[Zachary_Gao's solution](#)

287.

1767C

[Count Binary Strings](#) · [Tutorial](#)

Quality: 3,034 global accepts · Rating: 2100 · first AC: 2023-04-29 · last AC: 2023-04-29 · C++14 (GCC 6-32) (first AC) · Tags: data structures, dp

[Zachary_Gao's solution](#)

288.

1811F

[Is It Flower? · Tutorial](#)

Quality: 2,168 global accepts · Rating: 2100 · first AC: 2023-04-09 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, graphs, implementation

[Zachary_Gao's solution](#)

289.

1811G1

[Vlad and the Nice Paths \(easy version\) · Tutorial](#)

Quality: 2,490 global accepts · Rating: 2100 · first AC: 2023-04-09 · last AC: 2023-04-09 · C++14 (GCC 6-32) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

290.

2178F

[Conquer or of Forest · Tutorial](#)

Quality: 1,824 global accepts · Rating: 2200 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, math, trees

[Zachary_Gao's solution](#)

291.

833B

[The Bakery · Tutorial](#)

Quality: 6,497 global accepts · Rating: 2200 · first AC: 2025-12-02 · last AC: 2025-12-02 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, divide and conquer, dp, two pointers

[Zachary_Gao's solution](#)

292.

1175E

[Minimal Segment Cover · Tutorial](#)

Quality: 4,539 global accepts · Rating: 2200 · first AC: 2025-10-20 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dfs and similar, divide and conquer, dp, greedy, implementation, trees

[Zachary_Gao's solution](#)

293.

2101C

[23 Kingdom · Tutorial](#)

Quality: 2,260 global accepts · Rating: 2200 · first AC: 2025-05-12 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, data structures, greedy, ternary search, two pointers

[Zachary_Gao's solution](#)

294.

1249F

[Maximum Weight Subset · Tutorial](#)

Quality: 2,746 global accepts · Rating: 2200 · first AC: 2025-01-26 · C++23 (GCC 14-64, msys2) (first AC) · Tags: dp, trees

[Zachary_Gao's solution](#)

295.

2039E

[Shohag Loves Inversions · Tutorial](#)

Quality: 2,372 global accepts · Rating: 2200 · first AC: 2024-11-23 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, implementation, math

[Zachary_Gao's solution](#)

296.

1467D

[Sum of Paths · Tutorial](#)

Quality: 3,995 global accepts · Rating: 2200 · first AC: 2024-11-21 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

297.

847D

[Dog Show · Tutorial](#)

Quality: 1,387 global accepts · Rating: 2200 · first AC: 2024-11-21 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, data structures, greedy

[Zachary_Gao's solution](#)

298.

1659E

[AND-MEX Walk](#) · [Tutorial](#)

Quality: 1,971 global accepts · Rating: 2200 · first AC: 2024-08-15 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, constructive algorithms, dfs and similar, dsu, graphs

[Zachary_Gao's solution](#)

299.

1425E

[Excitation of Atoms](#) · [Tutorial](#)

Quality: 1,013 global accepts · Rating: 2200 · first AC: 2024-03-15 · last AC: 2024-03-15 · C++17 (GCC 7-32) (first AC) · Tags: greedy, implementation

[Zachary_Gao's solution](#)

300.

850C

[Arpa and a game with Mojtaba](#) · [Tutorial](#)

Quality: 1,867 global accepts · Rating: 2200 · first AC: 2024-03-14 · last AC: 2024-03-14 · C++17 (GCC 7-32) (first AC) · Tags: bitmasks, dp, games

[Zachary_Gao's solution](#)

301.

555C

[Case of Chocolate](#) · [Tutorial](#)

Quality: 2,061 global accepts · Rating: 2200 · first AC: 2024-03-14 · last AC: 2024-03-14 · C++17 (GCC 7-32) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

302.

1918E

[ace5 and Task Order](#) · [Tutorial](#)

Quality: 2,062 global accepts · Rating: 2200 · first AC: 2024-01-31 · last AC: 2024-02-06 · C++20 (GCC 11-64) (first AC) · Tags: constructive algorithms, divide and conquer, implementation, interactive, probabilities, sortings

[Zachary_Gao's solution](#)

303.

1909F1

[Small Permutation Problem \(Easy Version\)](#) · [Tutorial](#)

Quality: 2,257 global accepts · Rating: 2200 · first AC: 2023-12-25 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: brute force, combinatorics, dp, math

[Zachary_Gao's solution](#)

304.

1901E

[Compressed Tree](#) · [Tutorial](#)

Quality: 1,978 global accepts · Rating: 2200 · first AC: 2023-12-08 · last AC: 2023-12-12 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, dp, graphs, greedy, sortings, trees

[Zachary_Gao's solution](#)

305.

138C

[Mushroom Gnomes - 2](#) · [Tutorial](#)

Quality: 963 global accepts · Rating: 2200 · first AC: 2023-12-02 · C++20 (GCC 11-64) (first AC) · Tags: binary search, data structures, probabilities, sortings

[Zachary_Gao's solution](#)

306.

1045G

[AI robots](#) · [Tutorial](#)

Quality: 1,984 global accepts · Rating: 2200 · first AC: 2023-11-26 · C++20 (GCC 11-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

307.

958E2

[Guard Duty \(medium\)](#) · [Tutorial](#)

Quality: 1,169 global accepts · Rating: 2200 · first AC: 2023-10-09 · C++20 (GCC 11-64) (first AC) · Tags: binary search, dp, greedy, sortings

[Zachary_Gao's solution](#)

308.

1854B

[Earn or Unlock](#) · [Tutorial](#)

Quality: 4,227 global accepts · Rating: 2200 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, brute force, dp

[Zachary_Gao's solution](#)

309.

1858D

[Trees and Segments](#) · [Tutorial](#)

Quality: 3,197 global accepts · Rating: 2200 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++20 (GCC 11-64) (first AC) · Tags: brute force, data structures, dp, greedy, two pointers

[Zachary_Gao's solution](#)

310.

13C

[Sequence](#) · [Tutorial](#)

Quality: 5,469 global accepts · Rating: 2200 · first AC: 2023-09-20 · C++20 (GCC 11-64) (first AC) · Tags: dp, sortings

[Zachary_Gao's solution](#)

311.

52C

[Circular RMQ](#) · [Tutorial](#)

Quality: 11,249 global accepts · Rating: 2200 · first AC: 2023-08-28 · C++14 (GCC 6-32) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

312.

165E

[Compatible Numbers](#) · [Tutorial](#)

Quality: 9,385 global accepts · Rating: 2200 · first AC: 2023-08-27 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, brute force, dfs and similar, dp

[Zachary_Gao's solution](#)

313.

76A

[Gift](#) · [Tutorial](#)

Quality: 2,263 global accepts · Rating: 2200 · first AC: 2023-07-12 · last AC: 2023-07-12 · C++20 (GCC 11-64) (first AC) · Tags: dsu, graphs, sortings, trees

[Zachary_Gao's solution](#)

314.

1811G2

[Vlad and the Nice Paths \(hard version\)](#) · [Tutorial](#)

Quality: 2,124 global accepts · Rating: 2200 · first AC: 2023-04-09 · C++14 (GCC 6-32) (first AC) · Tags: binary search, combinatorics, data structures, dp, math, two pointers

[Zachary_Gao's solution](#)

315.

2190C

[Comparable Permutations](#) · [Tutorial](#)

Quality: 1,291 global accepts · Rating: 2300 · first AC: 2026-01-17 · C++20 (GCC 13-64) (first AC) · Tags: greedy, implementation, interactive, sortings, two pointers

[Zachary_Gao's solution](#)

316.

2180E

[No Effect XOR](#) · [Tutorial](#)

Quality: 1,737 global accepts · Rating: 2300 · first AC: 2025-12-20 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, divide and conquer, dp, greedy, math

[Zachary_Gao's solution](#)

317.

2164E

[Journey](#) · [Tutorial](#)

Quality: 1,580 global accepts · Rating: 2300 · first AC: 2025-11-06 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dfs and similar, dsu, graphs, greedy

[Zachary_Gao's solution](#)

318.

677E

[Vanya and Balloons](#) · [Tutorial](#)

Quality: 755 global accepts · Rating: 2300 · first AC: 2025-10-20 · last AC: 2025-10-20 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, dp, implementation

[Zachary_Gao's solution](#)

319.

2159C

[Twin Polynomials](#) · [Tutorial](#)

Quality: 1,688 global accepts · Rating: 2300 · first AC: 2025-10-12 · C++23 (GCC 14-64, msys2) (first AC) · Tags: combinatorics, graph matchings, math

[Zachary_Gao's solution](#)

320.

2129C3

[Interactive RBS \(Hard Version\)](#) · [Tutorial](#)

Quality: 1,663 global accepts · Rating: 2300 · first AC: 2025-07-31 · C++20 (GCC 13-64) (first AC) · Tags: binary search, bitmasks, constructive algorithms, dp, interactive

[Zachary_Gao's solution](#)

321.

2107F1

[Cycling \(Easy Version\)](#) · [Tutorial](#)

Quality: 1,823 global accepts · Rating: 2300 · first AC: 2025-05-06 · C++17 (GCC 7-32) (first AC) · Tags: binary search, brute force, dp, greedy

[Zachary_Gao's solution](#)

322.

2097B

[Baggage Claim](#) · [Tutorial](#)

Quality: 1,932 global accepts · Rating: 2300 · first AC: 2025-04-26 · C++23 (GCC 14-64, msys2) (first AC) · Tags: combinatorics, dfs and similar, dp, dsu, graphs, implementation, math, trees

[Zachary_Gao's solution](#)

323.

2035E

[Monster](#) · [Tutorial](#)

Quality: 1,965 global accepts · Rating: 2300 · first AC: 2024-10-27 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, constructive algorithms, greedy, implementation, math, ternary search

[Zachary_Gao's solution](#)

324.

1396C

[Monster Invaders](#) · [Tutorial](#)

Quality: 2,784 global accepts · Rating: 2300 · first AC: 2024-09-02 · last AC: 2024-09-02 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy, implementation

[Zachary_Gao's solution](#)

325.

888G

[Xor-MST](#) · [Tutorial](#)

Quality: 5,858 global accepts · Rating: 2300 · first AC: 2024-07-19 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, constructive algorithms, data structures

[Zachary_Gao's solution](#)

326.

1942E

[Farm Game](#) · [Tutorial](#)

Quality: 1,957 global accepts · Rating: 2300 · first AC: 2024-03-31 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, games

[Zachary_Gao's solution](#)

327.

1943C

[Tree Compass](#) · [Tutorial](#)

Quality: 2,600 global accepts · Rating: 2300 · first AC: 2024-03-17 · C++17 (GCC 7-32) (first AC) · Tags: constructive algorithms, dfs and similar, greedy, trees

[Zachary_Gao's solution](#)

328.

489E

[Hiking](#) · [Tutorial](#)

Quality: 1,147 global accepts · Rating: 2300 · first AC: 2024-03-15 · C++17 (GCC 7-32) (first AC) · Tags: binary search, dp

[Zachary_Gao's solution](#)

329.

78D

[Archer's Shot](#) · [Tutorial](#)

Quality: 373 global accepts · Rating: 2300 · first AC: 2024-03-15 · C++17 (GCC 7-32) (first AC) · Tags: binary search, geometry, math, two pointers

[Zachary_Gao's solution](#)

330.

362E

[Petya and Pipes](#) · [Tutorial](#)

Quality: 895 global accepts · Rating: 2300 · first AC: 2024-03-14 · last AC: 2024-03-15 · C++17 (GCC 7-32) (first AC) · Tags: flows, graphs, shortest paths

[Zachary_Gao's solution](#)

331.

248D

[Sweets for Everyone!](#) · [Tutorial](#)

Quality: 530 global accepts · Rating: 2300 · first AC: 2024-03-14 · C++17 (GCC 7-32) (first AC) · Tags: binary search, greedy, implementation

[Zachary_Gao's solution](#)

332.

1874C

[Jellyfish and EVA](#) · [Tutorial](#)

Quality: 2,194 global accepts · Rating: 2300 · first AC: 2024-03-14 · C++17 (GCC 7-32) (first AC) · Tags: dp, graphs, greedy, math, probabilities

[Zachary_Gao's solution](#)

333.

566A

[Matching Names](#) · [Tutorial](#)

Quality: 1,064 global accepts · Rating: 2300 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: dfs and similar, strings, trees

[Zachary_Gao's solution](#)

334.

1528C

[Trees of Tranquillity](#) · [Tutorial](#)

Quality: 2,952 global accepts · Rating: 2300 · first AC: 2024-01-26 · last AC: 2024-01-26 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dfs and similar, greedy, trees

[Zachary_Gao's solution](#)

335.

802G3

[Fake News \(hard\)](#) · [Tutorial](#)

Quality: 1,838 global accepts · Rating: 2300 · first AC: 2024-01-17 · C++20 (GCC 11-64) (first AC) · Tags: string suffix structures

[Zachary_Gao's solution](#)

336.

1919F1

[Wine Factory \(Easy Version\)](#) · [Tutorial](#)

Quality: 2,581 global accepts · Rating: 2300 · first AC: 2024-01-06 · last AC: 2024-01-08 · C++20 (GCC 11-64) (first AC) · Tags: data structures, greedy

[Zachary_Gao's solution](#)

337.

786B

[Legacy](#) · [Tutorial](#)

Quality: 8,020 global accepts · Rating: 2300 · first AC: 2023-12-07 · last AC: 2023-12-07 · C++14 (GCC 6-32) (first AC) · Tags: data structures, graphs, shortest paths

[Zachary_Gao's solution](#)

338.

558E

[A Simple Task](#) · [Tutorial](#)

Quality: 7,401 global accepts · Rating: 2300 · first AC: 2023-11-09 · last AC: 2023-11-09 · C++20 (GCC 11-64) (first AC) · Tags: data structures, sortings, strings

[Zachary_Gao's solution](#)

339.

652E

[Pursuit For Artifacts](#) · [Tutorial](#)

Quality: 2,865 global accepts · Rating: 2300 · first AC: 2023-10-19 · last AC: 2023-10-19 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, dsu, graphs, trees

[Zachary_Gao's solution](#)

340.

600E

[Lomsat gelral](#) · [Tutorial](#)

Quality: 18,404 global accepts · Rating: 2300 · first AC: 2023-10-08 · last AC: 2023-10-08 · C++14 (GCC 6-32) (first AC) · Tags: data structures, dfs and similar, dsu, trees

[Zachary_Gao's solution](#)

341.

1842E

[Tenzing and Triangle](#) · [Tutorial](#)

Quality: 1,831 global accepts · Rating: 2300 · first AC: 2023-09-21 · last AC: 2023-09-21 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, geometry, greedy, math

[Zachary_Gao's solution](#)

342.

713C

[Sonya and Problem Without a Legend](#) · [Tutorial](#)

Quality: 6,533 global accepts · Rating: 2300 · first AC: 2023-09-20 · last AC: 2023-09-20 · C++14 (GCC 6-32) (first AC) · Tags: dp, sortings

[Zachary_Gao's solution](#)

343.

677D

[Vanya and Treasure](#) · [Tutorial](#)

Quality: 1,958 global accepts · Rating: 2300 · first AC: 2023-07-20 · last AC: 2023-07-20 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, graphs, shortest paths

[Zachary_Gao's solution](#)

344.

1156F

[Card Bag](#) · [Tutorial](#)

Quality: 1,715 global accepts · Rating: 2300 · first AC: 2023-04-01 · last AC: 2023-04-01 · C++14 (GCC 6-32) (first AC) · Tags: dp, math, probabilities

[Zachary_Gao's solution](#)

345.

1710E

[Two Arrays](#) · [Tutorial](#)

Quality: 583 global accepts · Rating: 2400 · first AC: 2026-02-02 · C++20 (GCC 13-64) (first AC) · Tags: binary search, games, graph matchings

[Zachary_Gao's solution](#)

346.

2174C1

[Beautiful Patterns \(Easy Version\)](#) · [Tutorial](#)

Quality: 1,166 global accepts · Rating: 2400 · first AC: 2025-12-06 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, math, probabilities

[Zachary_Gao's solution](#)

347.

2157F

[Git Gud](#) · [Tutorial](#)

Quality: 1,292 global accepts · Rating: 2400 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: brute force, constructive algorithms, divide and conquer, math, ternary search

[Zachary_Gao's solution](#)

348.

2161E

[Left is Always Right](#) · [Tutorial](#)

Quality: 782 global accepts · Rating: 2400 · first AC: 2025-10-31 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, implementation, math

[Zachary_Gao's solution](#)

349.

2097C

[Bermuda Triangle](#) · [Tutorial](#)

Quality: 1,024 global accepts · Rating: 2400 · first AC: 2025-04-26 · C++23 (GCC 14-64, msys2) (first AC) · Tags: chinese remainder theorem, geometry, implementation, math, number theory

[Zachary_Gao's solution](#)

350.

1902F

[Trees and XOR Queries Again](#) · [Tutorial](#)

Quality: 1,480 global accepts · Rating: 2400 · first AC: 2023-12-04 · last AC: 2025-02-16 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dfs and similar, divide and conquer, graphs, implementation, math, trees

[Zachary_Gao's solution](#)

351.

1499F

[Diameter Cuts](#) · [Tutorial](#)

Quality: 1,588 global accepts · Rating: 2400 · first AC: 2024-11-20 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dfs and similar, dp, trees

[Zachary_Gao's solution](#)

352.

2023C

[C+K+S](#) · [Tutorial](#)

Quality: 1,376 global accepts · Rating: 2400 · first AC: 2024-10-20 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dfs and similar, graphs, greedy, hashing, implementation, strings

[Zachary_Gao's solution](#)

353.

1868C

[Travel Plan](#) · [Tutorial](#)

Quality: 1,375 global accepts · Rating: 2400 · first AC: 2024-09-25 · last AC: 2024-09-25 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, implementation, math, trees

[Zachary_Gao's solution](#)

354.

1408E

[Avoid Rainbow Cycles](#) · [Tutorial](#)

Quality: 2,184 global accepts · Rating: 2400 · first AC: 2024-07-14 · last AC: 2024-07-14 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dsu, graphs, greedy, sortings, trees

[Zachary_Gao's solution](#)

355.

1844E

[Great Grids](#) · [Tutorial](#)

Quality: 2,155 global accepts · Rating: 2400 · first AC: 2024-07-10 · last AC: 2024-07-10 · C++20 (GCC 13-64) (first AC) · Tags: 2-sat, constructive algorithms, dfs and similar, dsu, graphs

[Zachary_Gao's solution](#)

356.

1981D

[Turtle and Multiplication](#) · [Tutorial](#)

Quality: 2,127 global accepts · Rating: 2400 · first AC: 2024-05-31 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dfs and similar, graphs, number theory

[Zachary_Gao's solution](#)

357.

1973D

[Cat, Fox and Maximum Array Split](#) · Tutorial

Quality: 2,256 global accepts · Rating: 2400 · first AC: 2024-05-18 · C++20 (GCC 13-64) (first AC) · Tags: brute force, interactive, math

[Zachary_Gao's solution](#)

358.

865C

[Gotta Go Fast](#) · Tutorial

Quality: 939 global accepts · Rating: 2400 · first AC: 2024-04-11 · C++20 (GCC 13-64) (first AC) · Tags: binary search, dp

[Zachary_Gao's solution](#)

359.

835E

[The penguin's game](#) · Tutorial

Quality: 1,349 global accepts · Rating: 2400 · first AC: 2024-03-28 · last AC: 2024-03-28 · C++17 (GCC 7-32) (first AC) · Tags: binary search, constructive algorithms, interactive

[Zachary_Gao's solution](#)

360.

498B

[Name That Tune](#) · Tutorial

Quality: 1,300 global accepts · Rating: 2400 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: dp, probabilities, two pointers

[Zachary_Gao's solution](#)

361.

1935E

[Distance Learning Courses in MAC](#) · Tutorial

Quality: 1,651 global accepts · Rating: 2400 · first AC: 2024-03-06 · last AC: 2024-03-06 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, brute force, data structures, greedy, math

[Zachary_Gao's solution](#)

362.

1936C

[Pokémon Arena](#) · Tutorial

Quality: 1,728 global accepts · Rating: 2400 · first AC: 2024-02-29 · last AC: 2024-03-01 · C++20 (GCC 11-64) (first AC) · Tags: data structures, graphs, greedy, implementation, shortest paths, sortings

[Zachary_Gao's solution](#)

363.

1106F

[Lunar New Year and a Recursive Sequence](#) · Tutorial

Quality: 1,182 global accepts · Rating: 2400 · first AC: 2024-02-29 · last AC: 2024-02-29 · C++20 (GCC 11-64) (first AC) · Tags: math, matrices, number theory

[Zachary_Gao's solution](#)

364.

1132G

[Greedy Subsequences](#) · Tutorial

Quality: 1,230 global accepts · Rating: 2400 · first AC: 2024-01-26 · last AC: 2024-01-26 · C++17 (GCC 9-64) (first AC) · Tags: data structures, dp, trees

[Zachary_Gao's solution](#)

365.

1527D

[MEX Tree](#) · Tutorial

Quality: 2,289 global accepts · Rating: 2400 · first AC: 2023-11-27 · last AC: 2023-11-27 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, dfs and similar, implementation, math, trees

[Zachary_Gao's solution](#)

366.

914E

[Palindromes in a Tree](#) · Tutorial

Quality: 1,921 global accepts · Rating: 2400 · first AC: 2023-11-13 · last AC: 2023-11-13 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, data structures, divide and conquer, trees

[Zachary_Gao's solution](#)

367.

1709E

[XOR Tree](#) · [Tutorial](#)

Quality: 3,957 global accepts · Rating: 2400 · first AC: 2023-10-08 · last AC: 2023-10-08 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, data structures, dfs and similar, dsu, greedy, trees

[Zachary_Gao's solution](#)

368.

733E

[Sleep in Class](#) · [Tutorial](#)

Quality: 1,065 global accepts · Rating: 2400 · first AC: 2023-10-07 · last AC: 2023-10-07 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, data structures, math, two pointers

[Zachary_Gao's solution](#)

369.

1874B

[Jellyfish and Math](#) · [Tutorial](#)

Quality: 1,392 global accepts · Rating: 2400 · first AC: 2023-10-04 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, brute force, dfs and similar, dp, graphs, shortest paths

[Zachary_Gao's solution](#)

370.

1879E

[Interactive Game with Coloring](#) · [Tutorial](#)

Quality: 1,577 global accepts · Rating: 2400 · first AC: 2023-10-04 · last AC: 2023-10-04 · C++20 (GCC 11-64) (first AC) · Tags: brute force, constructive algorithms, dfs and similar, graphs, implementation, interactive, trees

[Zachary_Gao's solution](#)

371.

1852C

[Ina of the Mountain](#) · [Tutorial](#)

Quality: 2,098 global accepts · Rating: 2400 · first AC: 2023-09-21 · last AC: 2023-09-22 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, greedy, math

[Zachary_Gao's solution](#)

372.

1839E

[Decreasing Game](#) · [Tutorial](#)

Quality: 1,541 global accepts · Rating: 2400 · first AC: 2023-09-21 · last AC: 2023-09-21 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, dfs and similar, dp, greedy, interactive

[Zachary_Gao's solution](#)

373.

1848F

[Vika and Wiki](#) · [Tutorial](#)

Quality: 2,036 global accepts · Rating: 2400 · first AC: 2023-09-21 · last AC: 2023-09-21 · C++20 (GCC 11-64) (first AC) · Tags: binary search, bitmasks, combinatorics, divide and conquer, dp, math

[Zachary_Gao's solution](#)

374.

416D

[Population Size](#) · [Tutorial](#)

Quality: 1,092 global accepts · Rating: 2400 · first AC: 2023-08-07 · C++14 (GCC 6-32) (first AC) · Tags: greedy, implementation, math

[Zachary_Gao's solution](#)

375.

626F

[Group Projects](#) · [Tutorial](#)

Quality: 3,592 global accepts · Rating: 2400 · first AC: 2023-08-03 · C++14 (GCC 6-32) (first AC) · Tags: dp

[Zachary_Gao's solution](#)

376.

266D

[BerDonalds](#) · [Tutorial](#)

Quality: 991 global accepts · Rating: 2400 · first AC: 2023-07-29 · C++14 (GCC 6-32) (first AC) · Tags: graphs, math, shortest paths

[Zachary_Gao's solution](#)

377.

1392F

[Omkar and Landslide](#) · [Tutorial](#)

Quality: 2,403 global accepts · Rating: 2400 · first AC: 2023-07-19 · C++20 (GCC 11-64) (first AC) · Tags: binary search, constructive algorithms, data structures, greedy, math

[Zachary_Gao's solution](#)

378.

959F

[Mahmoud and Ehab and yet another xor task](#) · [Tutorial](#)

Quality: 2,828 global accepts · Rating: 2400 · first AC: 2023-06-11 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, dp, math, matrices

[Zachary_Gao's solution](#)

379.

513G2

[Inversions problem](#) · [Tutorial](#)

Quality: 725 global accepts · Rating: 2400 · first AC: 2023-04-22 · C++14 (GCC 6-32) (first AC) · Tags: dp, probabilities

[Zachary_Gao's solution](#)

380.

2190D

[Prufer Vertex](#) · [Tutorial](#)

Quality: 950 global accepts · Rating: 2500 · first AC: 2026-01-17 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dsu, number theory, probabilities, trees

[Zachary_Gao's solution](#)

381.

2183F

[Jumping Man](#) · [Tutorial](#)

Quality: 1,130 global accepts · Rating: 2500 · first AC: 2026-01-07 · C++20 (GCC 13-64) (first AC) · Tags: brute force, combinatorics, dfs and similar, dp, trees

[Zachary_Gao's solution](#)

382.

1100F

[Ivan and Burgers](#) · [Tutorial](#)

Quality: 3,690 global accepts · Rating: 2500 · first AC: 2023-11-25 · last AC: 2025-12-08 · C++20 (GCC 11-64) (first AC) · Tags: data structures, divide and conquer, greedy, math

[Zachary_Gao's solution](#)

383.

2174C2

[Beautiful Patterns \(Hard Version\)](#) · [Tutorial](#)

Quality: 1,024 global accepts · Rating: 2500 · first AC: 2025-12-06 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, math, probabilities

[Zachary_Gao's solution](#)

384.

1710C

[XOR Triangle](#) · [Tutorial](#)

Quality: 1,628 global accepts · Rating: 2500 · first AC: 2025-12-05 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, constructive algorithms, dp, greedy, math

[Zachary_Gao's solution](#)

385.

2165D

[Path Split](#) · [Tutorial](#)

Quality: 896 global accepts · Rating: 2500 · first AC: 2025-11-16 · C++20 (GCC 13-64) (first AC) · Tags: graph matchings, greedy

[Zachary_Gao's solution](#)

386.

2159D1

[Inverse Minimum Partition \(Easy Version\)](#) · [Tutorial](#)

Quality: 1,021 global accepts · Rating: 2500 · first AC: 2025-10-13 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, dp,

geometry, greedy, math, two pointers

[Zachary_Gao's solution](#)

387.

2152F

[Triple Attack](#) · [Tutorial](#)

Quality: 1,036 global accepts · Rating: 2500 · first AC: 2025-10-03 · last AC: 2025-10-04 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, greedy

[Zachary_Gao's solution](#)

388.

2135D2

[From the Unknown \(Hard Version\)](#) · [Tutorial](#)

Quality: 991 global accepts · Rating: 2500 · first AC: 2025-08-30 · C++23 (GCC 14-64, msys2) (first AC) · Tags: brute force, constructive algorithms, interactive, math

[Zachary_Gao's solution](#)

389.

2101D

[Mani and Segments](#) · [Tutorial](#)

Quality: 1,019 global accepts · Rating: 2500 · first AC: 2025-05-12 · last AC: 2025-05-12 · C++20 (GCC 13-64) (first AC) · Tags: data structures, implementation, sortings, two pointers

[Zachary_Gao's solution](#)

390.

2081B

[Balancing](#) · [Tutorial](#)

Quality: 998 global accepts · Rating: 2500 · first AC: 2025-03-16 · C++23 (GCC 14-64, msys2) (first AC) · Tags: greedy

[Zachary_Gao's solution](#)

391.

2057E2

[Another Exercise on Graphs \(hard version\)](#) · [Tutorial](#)

Quality: 1,928 global accepts · Rating: 2500 · first AC: 2025-01-05 · C++23 (GCC 14-64, msys2) (first AC) · Tags: binary search, dfs and similar, dp, dsu, graphs, shortest paths, sortings

[Zachary_Gao's solution](#)

392.

2048F

[Kevin and Math Class](#) · [Tutorial](#)

Quality: 1,318 global accepts · Rating: 2500 · first AC: 2024-12-19 · C++20 (GCC 13-64) (first AC) · Tags: brute force, data structures, divide and conquer, dp, implementation, math, trees

[Zachary_Gao's solution](#)

393.

884F

[Anti-Palindromize](#) · [Tutorial](#)

Quality: 1,280 global accepts · Rating: 2500 · first AC: 2024-07-24 · C++20 (GCC 13-64) (first AC) · Tags: flows, graphs, greedy

[Zachary_Gao's solution](#)

394.

1973E

[Cat, Fox and Swaps](#) · [Tutorial](#)

Quality: 993 global accepts · Rating: 2500 · first AC: 2024-05-18 · C++20 (GCC 13-64) (first AC) · Tags: graphs, math, sortings

[Zachary_Gao's solution](#)

395.

528D

[Fuzzy Search](#) · [Tutorial](#)

Quality: 2,861 global accepts · Rating: 2500 · first AC: 2024-05-05 · last AC: 2024-05-05 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, fft

[Zachary_Gao's solution](#)

396.

1845E

[Boxes and Balls](#) · [Tutorial](#)

Quality: 1,605 global accepts · Rating: 2500 · first AC: 2024-03-25 · last AC: 2024-03-25 · C++20 (GCC 13-64) (first AC) · Tags: dp, implementation, math

[Zachary_Gao's solution](#)

397.

468C

[Hack it! · Tutorial](#)

Quality: 2,739 global accepts · Rating: 2500 · first AC: 2024-03-22 · last AC: 2024-03-22 · C++20 (GCC 13-64) (first AC) · Tags: binary search, constructive algorithms, math

[Zachary_Gao's solution](#)

398.

704B

[Ant Man · Tutorial](#)

Quality: 2,169 global accepts · Rating: 2500 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: dp, graphs, greedy

[Zachary_Gao's solution](#)

399.

93C

[Azembler · Tutorial](#)

Quality: 450 global accepts · Rating: 2500 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: brute force, implementation

[Zachary_Gao's solution](#)

400.

1838E

[Count Supersequences · Tutorial](#)

Quality: 1,851 global accepts · Rating: 2500 · first AC: 2024-03-08 · last AC: 2024-03-08 · C++20 (GCC 11-64) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

401.

1467E

[Distinctive Roots in a Tree · Tutorial](#)

Quality: 1,762 global accepts · Rating: 2500 · first AC: 2024-01-28 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dfs and similar, dp, trees

[Zachary_Gao's solution](#)

402.

1909F2

[Small Permutation Problem \(Hard Version\) · Tutorial](#)

Quality: 1,229 global accepts · Rating: 2500 · first AC: 2023-12-25 · last AC: 2023-12-25 · C++17 (GCC 9-64) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

403.

1903F

[Babysitting · Tutorial](#)

Quality: 908 global accepts · Rating: 2500 · first AC: 2023-12-07 · last AC: 2023-12-07 · C++14 (GCC 6-32) (first AC) · Tags: 2-sat, binary search, data structures, graphs, trees

[Zachary_Gao's solution](#)

404.

1903D2

[Maximum And Queries \(hard version\) · Tutorial](#)

Quality: 1,026 global accepts · Rating: 2500 · first AC: 2023-12-06 · last AC: 2023-12-06 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, divide and conquer, dp, greedy

[Zachary_Gao's solution](#)

405.

1497E2

[Square-Free Division \(hard version\) · Tutorial](#)

Quality: 1,915 global accepts · Rating: 2500 · first AC: 2023-11-27 · last AC: 2023-11-27 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, greedy, math, number theory, two pointers

[Zachary_Gao's solution](#)

406.

710D

[Two Arithmetic Progressions](#) · [Tutorial](#)

Quality: 1,845 global accepts · Rating: 2500 · first AC: 2023-09-14 · last AC: 2023-09-15 · C++14 (GCC 6-32) (first AC) · Tags: math, number theory

[Zachary_Gao's solution](#)

407.

868F

[Yet Another Minimization Problem](#) · [Tutorial](#)

Quality: 5,100 global accepts · Rating: 2500 · first AC: 2023-07-27 · C++20 (GCC 11-64) (first AC) · Tags: divide and conquer, dp

[Zachary_Gao's solution](#)

408.

1740F

[Conditional Mix](#) · [Tutorial](#)

Quality: 1,068 global accepts · Rating: 2600 · first AC: 2026-02-09 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

409.

1566F

[Points Movement](#) · [Tutorial](#)

Quality: 1,172 global accepts · Rating: 2600 · first AC: 2026-01-21 · last AC: 2026-01-21 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dp, greedy, implementation, sortings

[Zachary_Gao's solution](#)

410.

1278F

[Cards](#) · [Tutorial](#)

Quality: 2,498 global accepts · Rating: 2600 · first AC: 2024-03-13 · last AC: 2025-12-09 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, math, number theory, probabilities

[Zachary_Gao's solution](#)

411.

1994G

[Minecraft](#) · [Tutorial](#)

Quality: 1,627 global accepts · Rating: 2600 · first AC: 2025-12-02 · last AC: 2025-12-02 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, dp, graphs, math

[Zachary_Gao's solution](#)

412.

2164F1

[Chain Prefix Rank \(Easy Version\)](#) · [Tutorial](#)

Quality: 650 global accepts · Rating: 2600 · first AC: 2025-11-07 · last AC: 2025-11-07 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dfs and similar, dp, math, trees

[Zachary_Gao's solution](#)

413.

662C

[Binary Table](#) · [Tutorial](#)

Quality: 2,425 global accepts · Rating: 2600 · first AC: 2025-08-06 · C++23 (GCC 14-64, msys2) (first AC) · Tags: bitmasks, brute force, divide and conquer, dp, fft, math

[Zachary_Gao's solution](#)

414.

2107E

[Ain and Apple Tree](#) · [Tutorial](#)

Quality: 934 global accepts · Rating: 2600 · first AC: 2025-05-06 · last AC: 2025-05-06 · C++17 (GCC 7-32) (first AC) · Tags: binary search, constructive algorithms, greedy, math, trees

[Zachary_Gao's solution](#)

415.

2081D

[MST in Modulo Graph](#) · [Tutorial](#)

Quality: 1,185 global accepts · Rating: 2600 · first AC: 2025-03-16 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, dsu, graphs, greedy, math, number theory, sortings, trees

[Zachary_Gao's solution](#)

416.

1827C

[Palindrome Partition](#) · [Tutorial](#)

Quality: 1,658 global accepts · Rating: 2600 · first AC: 2025-02-03 · C++23 (GCC 14-64, msys2) (first AC) · Tags: binary search, brute force, data structures, dp, hashing, strings

[Zachary_Gao's solution](#)

417.

2053F

[Earnest Matrix Complement](#) · [Tutorial](#)

Quality: 947 global accepts · Rating: 2600 · first AC: 2024-12-28 · C++20 (GCC 13-64) (first AC) · Tags: brute force, data structures, dp, greedy, implementation, math

[Zachary_Gao's solution](#)

418.

1704F

[Colouring Game](#) · [Tutorial](#)

Quality: 1,304 global accepts · Rating: 2600 · first AC: 2024-10-22 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dp, games

[Zachary_Gao's solution](#)

419.

1699E

[Three Days Grace](#) · [Tutorial](#)

Quality: 1,374 global accepts · Rating: 2600 · first AC: 2024-10-06 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dp, greedy, math, number theory, two pointers

[Zachary_Gao's solution](#)

420.

599E

[Sandy and Nuts](#) · [Tutorial](#)

Quality: 761 global accepts · Rating: 2600 · first AC: 2024-09-26 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, dp, trees

[Zachary_Gao's solution](#)

421.

321E

[Ciel and Gondolas](#) · [Tutorial](#)

Quality: 6,272 global accepts · Rating: 2600 · first AC: 2024-09-12 · C++20 (GCC 13-64) (first AC) · Tags: data structures, divide and conquer, dp

[Zachary_Gao's solution](#)

422.

917D

[Stranger Trees](#) · [Tutorial](#)

Quality: 1,469 global accepts · Rating: 2600 · first AC: 2024-07-12 · last AC: 2024-07-12 · C++20 (GCC 13-64) (first AC) · Tags: dp, math, matrices, trees

[Zachary_Gao's solution](#)

423.

741C

[Arpa's overnight party and Mehrdad's silent entering](#) · [Tutorial](#)

Quality: 3,118 global accepts · Rating: 2600 · first AC: 2024-07-10 · last AC: 2024-07-10 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, dfs and similar, graphs

[Zachary_Gao's solution](#)

424.

1957F1

[Frequency Mismatch \(Easy Version\)](#) · [Tutorial](#)

Quality: 664 global accepts · Rating: 2600 · first AC: 2024-04-22 · last AC: 2024-04-24 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, divide and conquer, hashing, probabilities, trees

[Zachary_Gao's solution](#)

425.

273E

[Dima and Game](#) · [Tutorial](#)

Quality: 401 global accepts · Rating: 2600 · first AC: 2024-03-26 · last AC: 2024-03-26 · C++20 (GCC 13-64) (first AC) · Tags: dp, games

[Zachary_Gao's solution](#)

426.

1110F

[Nearest Leaf](#) · [Tutorial](#)

Quality: 2,050 global accepts · Rating: 2600 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: data structures, trees

[Zachary_Gao's solution](#)

427.

1898F

[Vova Escapes the Matrix](#) · [Tutorial](#)

Quality: 942 global accepts · Rating: 2600 · first AC: 2023-12-08 · last AC: 2023-12-08 · C++14 (GCC 6-32) (first AC) · Tags: brute force, dfs and similar, divide and conquer, shortest paths

[Zachary_Gao's solution](#)

428.

1536F

[Omkar and Akmar](#) · [Tutorial](#)

Quality: 1,102 global accepts · Rating: 2600 · first AC: 2023-11-27 · last AC: 2023-11-28 · C++20 (GCC 11-64) (first AC) · Tags: chinese remainder theorem, combinatorics, constructive algorithms, fft, games, geometry, math, meet-in-the-middle, stri...

[Zachary_Gao's solution](#)

429.

848C

[Goodbye Souvenir](#) · [Tutorial](#)

Quality: 1,578 global accepts · Rating: 2600 · first AC: 2023-11-26 · last AC: 2023-11-26 · C++20 (GCC 11-64) (first AC) · Tags: data structures, divide and conquer

[Zachary_Gao's solution](#)

430.

240F

[TorCoder](#) · [Tutorial](#)

Quality: 2,259 global accepts · Rating: 2600 · first AC: 2023-11-09 · last AC: 2023-11-09 · C++20 (GCC 11-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

431.

527E

[Data Center Drama](#) · [Tutorial](#)

Quality: 2,191 global accepts · Rating: 2600 · first AC: 2023-09-12 · last AC: 2023-09-15 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, graphs

[Zachary_Gao's solution](#)

432.

1208F

[Bits And Pieces](#) · [Tutorial](#)

Quality: 3,300 global accepts · Rating: 2600 · first AC: 2023-08-22 · last AC: 2023-08-22 · C++14 (GCC 6-32) (first AC) · Tags: bitmasks, dfs and similar, dp, greedy

[Zachary_Gao's solution](#)

433.

1680F

[Lenient Vertex Cover](#) · [Tutorial](#)

Quality: 901 global accepts · Rating: 2600 · first AC: 2023-08-22 · C++14 (GCC 6-32) (first AC) · Tags: dfs and similar, divide and conquer, dsu, graphs, trees

[Zachary_Gao's solution](#)

434.

1340D

[Nastya and Time Machine](#) · [Tutorial](#)

Quality: 1,071 global accepts · Rating: 2600 · first AC: 2023-08-21 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, dfs and similar, graphs, trees

[Zachary_Gao's solution](#)

435.

1270F

[Awesome Substrings](#) · [Tutorial](#)

Quality: 1,336 global accepts · Rating: 2600 · first AC: 2023-07-20 · last AC: 2023-08-21 · C++20 (GCC 11-64) (first AC) · Tags: math, strings

[Zachary_Gao's solution](#)

436.

372D

[Choosing Subtree is Fun](#) · [Tutorial](#)

Quality: 1,129 global accepts · Rating: 2600 · first AC: 2023-07-19 · last AC: 2023-07-19 · C++20 (GCC 11-64) (first AC) · Tags: binary search, data structures, dfs and similar, trees, two pointers

[Zachary_Gao's solution](#)

437.

241E

[Flights](#) · [Tutorial](#)

Quality: 1,383 global accepts · Rating: 2600 · first AC: 2023-05-21 · C++14 (GCC 6-32) (first AC) · Tags: graphs, shortest paths

[Zachary_Gao's solution](#)

438.

932F

[Escape Through Leaf](#) · [Tutorial](#)

Quality: 4,115 global accepts · Rating: 2700 · first AC: 2023-11-25 · last AC: 2025-12-08 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, geometry

[Zachary_Gao's solution](#)

439.

2115C

[Gellyfish and Eternal Violet](#) · [Tutorial](#)

Quality: 913 global accepts · Rating: 2700 · first AC: 2025-06-01 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, greedy, math, probabilities

[Zachary_Gao's solution](#)

440.

1916H2

[Matrix Rank \(Hard Version\)](#) · [Tutorial](#)

Quality: 631 global accepts · Rating: 2700 · first AC: 2025-05-28 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math, matrices, string suffix structures

[Zachary_Gao's solution](#)

441.

1916H1

[Matrix Rank \(Easy Version\)](#) · [Tutorial](#)

Quality: 715 global accepts · Rating: 2700 · first AC: 2025-05-28 · C++20 (GCC 13-64) (first AC) · Tags: brute force, combinatorics, dp, math, matrices

[Zachary_Gao's solution](#)

442.

2081C

[Quaternary Matrix](#) · [Tutorial](#)

Quality: 354 global accepts · Rating: 2700 · first AC: 2025-03-16 · C++23 (GCC 14-64, msys2) (first AC) · Tags: bitmasks, constructive algorithms, greedy, implementation, matrices

[Zachary_Gao's solution](#)

443.

524F

[And Yet Another Bracket Sequence](#) · [Tutorial](#)

Quality: 594 global accepts · Rating: 2700 · first AC: 2025-01-26 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, greedy, hashing, string suffix structures, strings

[Zachary_Gao's solution](#)

444.

1313E

[Concatenation with intersection](#) · [Tutorial](#)

Quality: 720 global accepts · Rating: 2700 · first AC: 2024-12-14 · C++20 (GCC 13-64) (first AC) · Tags: data structures, hashing, strings, two pointers

[Zachary_Gao's solution](#)

445.

407D

[Largest Submatrix 3](#) · [Tutorial](#)

Quality: 804 global accepts · Rating: 2700 · first AC: 2024-09-29 · C++20 (GCC 13-64) (first AC) · Tags: dp, hashing

[Zachary_Gao's solution](#)

446.

623D

[Birthday](#) · [Tutorial](#)

Quality: 555 global accepts · Rating: 2700 · first AC: 2024-09-28 · C++20 (GCC 13-64) (first AC) · Tags: greedy, math, probabilities

[Zachary_Gao's solution](#)

447.

827D

[Best Edge Weight](#) · [Tutorial](#)

Quality: 1,370 global accepts · Rating: 2700 · first AC: 2024-09-13 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dfs and similar, graphs, trees

[Zachary_Gao's solution](#)

448.

1781F

[Bracket Insertion](#) · [Tutorial](#)

Quality: 1,316 global accepts · Rating: 2700 · first AC: 2024-07-14 · last AC: 2024-07-14 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math, trees

[Zachary_Gao's solution](#)

449.

1730F

[Almost Sorted](#) · [Tutorial](#)

Quality: 743 global accepts · Rating: 2700 · first AC: 2024-07-14 · last AC: 2024-07-14 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, data structures, dp

[Zachary_Gao's solution](#)

450.

1789F

[Serval and Brain Power](#) · [Tutorial](#)

Quality: 999 global accepts · Rating: 2700 · first AC: 2024-07-14 · last AC: 2024-07-14 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, dp, greedy, implementation, strings

[Zachary_Gao's solution](#)

451.

1957F2

[Frequency Mismatch \(Hard Version\)](#) · [Tutorial](#)

Quality: 610 global accepts · Rating: 2700 · first AC: 2024-04-24 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, dfs and similar, hashing, probabilities, trees

[Zachary_Gao's solution](#)

452.

643E

[Bear and Destroying Subtrees](#) · [Tutorial](#)

Quality: 700 global accepts · Rating: 2700 · first AC: 2024-04-01 · last AC: 2024-04-01 · C++17 (GCC 7-32) (first AC) · Tags: dp, math, probabilities, trees

[Zachary_Gao's solution](#)

453.

500F

[New Year Shopping](#) · [Tutorial](#)

Quality: 829 global accepts · Rating: 2700 · first AC: 2024-04-01 · last AC: 2024-04-01 · C++20 (GCC 13-64) (first AC) · Tags: divide and conquer, dp

[Zachary_Gao's solution](#)

454.

356D

[Bags and Coins](#) · [Tutorial](#)

Quality: 1,091 global accepts · Rating: 2700 · first AC: 2024-03-31 · last AC: 2024-03-31 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, constructive algorithms, dp, greedy

[Zachary_Gao's solution](#)

455.

113D

[Museum](#) · [Tutorial](#)

Quality: 818 global accepts · Rating: 2700 · first AC: 2024-03-22 · last AC: 2024-03-26 · C++20 (GCC 13-64) (first AC) · Tags: math, matrices, probabilities

[Zachary_Gao's solution](#)

456.

293B

[Distinct Paths](#) · [Tutorial](#)

Quality: 941 global accepts · Rating: 2700 · first AC: 2024-03-13 · last AC: 2024-03-13 · C++17 (GCC 7-32) (first AC) · Tags: brute force, combinatorics

[Zachary_Gao's solution](#)

457.

575A

[Fibonacci](#) · [Tutorial](#)

Quality: 863 global accepts · Rating: 2700 · first AC: 2023-08-09 · C++14 (GCC 6-32) (first AC) · Tags: data structures, math, matrices

[Zachary_Gao's solution](#)

458.

878C

[Tournament](#) · [Tutorial](#)

Quality: 1,029 global accepts · Rating: 2700 · first AC: 2023-07-29 · C++14 (GCC 6-32) (first AC) · Tags: data structures, graphs

[Zachary_Gao's solution](#)

459.

578D

[LCS Again](#) · [Tutorial](#)

Quality: 961 global accepts · Rating: 2700 · first AC: 2023-07-27 · C++20 (GCC 11-64) (first AC) · Tags: dp, greedy

[Zachary_Gao's solution](#)

460.

713D

[Animals and Puzzle](#) · [Tutorial](#)

Quality: 1,359 global accepts · Rating: 2700 · first AC: 2023-07-18 · last AC: 2023-07-18 · C++14 (GCC 6-32) (first AC) · Tags: binary search, data structures

[Zachary_Gao's solution](#)

461.

906D

[Power Tower](#) · [Tutorial](#)

Quality: 2,679 global accepts · Rating: 2700 · first AC: 2023-07-12 · C++20 (GCC 11-64) (first AC) · Tags: chinese remainder theorem, math, number theory

[Zachary_Gao's solution](#)

462.

1149C

[Tree Generator™](#) · [Tutorial](#)

Quality: 1,672 global accepts · Rating: 2700 · first AC: 2023-07-10 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: data structures, implementation, trees

[Zachary_Gao's solution](#)

463.

1450E

[Capitalism](#) · [Tutorial](#)

Quality: 1,430 global accepts · Rating: 2700 · first AC: 2023-05-21 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, dfs and similar, graphs, shortest paths

[Zachary_Gao's solution](#)

464.

830D

[Singer House](#) · [Tutorial](#)

Quality: 980 global accepts · Rating: 2800 · first AC: 2026-03-05 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, graphs, trees

[Zachary_Gao's solution](#)

465.

1393E1

[Twilight and Ancient Scroll \(easier version\)](#) · [Tutorial](#)

Quality: 447 global accepts · Rating: 2800 · first AC: 2026-01-22 · C++20 (GCC 13-64) (first AC) · Tags: dp, hashing, implementation, string suffix structures, strings

[Zachary_Gao's solution](#)

466.

1923F

[Shrink-Reverse](#) · [Tutorial](#)

Quality: 536 global accepts · Rating: 2800 · first AC: 2025-10-18 · last AC: 2026-01-22 · C++20 (GCC 13-64) (first AC) · Tags: binary search, brute force, greedy, hashing, implementation, string suffix structures, strings

[Zachary_Gao's solution](#)

467.

1913F

[Palindromic Problem](#) · [Tutorial](#)

Quality: 543 global accepts · Rating: 2800 · first AC: 2025-02-03 · last AC: 2026-01-22 · C++23 (GCC 14-64, msys2) (first AC) · Tags: binary search, data structures, hashing, string suffix structures, strings

[Zachary_Gao's solution](#)

468.

2178G

[deCH OR Dations](#) · [Tutorial](#)

Quality: 594 global accepts · Rating: 2800 · first AC: 2025-12-27 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, data structures, dp, hashing, probabilities

[Zachary_Gao's solution](#)

469.

2180F1

[Control Car \(Easy Version\)](#) · [Tutorial](#)

Quality: 405 global accepts · Rating: 2800 · first AC: 2025-12-20 · last AC: 2025-12-20 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, probabilities

[Zachary_Gao's solution](#)

470.

1654F

[Minimal String Xoration](#) · [Tutorial](#)

Quality: 1,483 global accepts · Rating: 2800 · first AC: 2025-12-09 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, data structures, divide and conquer, greedy, hashing, sortings, strings

[Zachary_Gao's solution](#)

471.

2157G

[Isaac's Queries](#) · [Tutorial](#)

Quality: 411 global accepts · Rating: 2800 · first AC: 2025-11-23 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, brute force, constructive algorithms, dfs and similar, divide and conquer, dp, greedy, interactive, math, pro...

[Zachary_Gao's solution](#)

472.

1732E

[Location](#) · [Tutorial](#)

Quality: 583 global accepts · Rating: 2800 · first AC: 2025-11-15 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dp, math, number theory

[Zachary_Gao's solution](#)

473.

1545C

[AquaMoon and Permutations](#) · [Tutorial](#)

Quality: 767 global accepts · Rating: 2800 · first AC: 2025-11-09 · C++20 (GCC 13-64) (first AC) · Tags: 2-sat, brute force, combinatorics, constructive algorithms, graph matchings, graphs

[Zachary_Gao's solution](#)

474.

2127F

[Hamed and AghaBalaSar](#) · [Tutorial](#)

Quality: 1,057 global accepts · Rating: 2800 · first AC: 2025-08-07 · C++23 (GCC 14-64, msys2) (first AC) · Tags: brute force, combinatorics, dp, math, probabilities

[Zachary_Gao's solution](#)

475.

2107F2

[Cycling \(Hard Version\)](#) · [Tutorial](#)

Quality: 507 global accepts · Rating: 2800 · first AC: 2025-05-06 · last AC: 2025-05-06 · C++17 (GCC 7-32) (first AC) · Tags: binary search, brute force, data structures, dp, greedy

[Zachary_Gao's solution](#)

476.

2048G

[Kevin and Matrices](#) · [Tutorial](#)

Quality: 742 global accepts · Rating: 2800 · first AC: 2024-12-20 · C++20 (GCC 13-64) (first AC) · Tags: brute force, combinatorics, dp, math

[Zachary_Gao's solution](#)

477.

2039F1

[Shohag Loves Counting \(Easy Version\)](#) · [Tutorial](#)

Quality: 506 global accepts · Rating: 2800 · first AC: 2024-11-25 · last AC: 2024-12-05 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, dp, math, number theory

[Zachary_Gao's solution](#)

478.

325E

[The Red Button](#) · [Tutorial](#)

Quality: 949 global accepts · Rating: 2800 · first AC: 2024-10-17 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dfs and similar, dsu, graphs, greedy

[Zachary_Gao's solution](#)

479.

794E

[Choosing Carrot](#) · [Tutorial](#)

Quality: 1,025 global accepts · Rating: 2800 · first AC: 2024-07-18 · last AC: 2024-07-18 · C++20 (GCC 13-64) (first AC) · Tags: games, math

[Zachary_Gao's solution](#)

480.

1842G

[Tenzing and Random Operations](#) · [Tutorial](#)

Quality: 1,577 global accepts · Rating: 2800 · first AC: 2024-07-02 · last AC: 2024-07-02 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math, probabilities

[Zachary_Gao's solution](#)

481.

838C

[Future Failure](#) · [Tutorial](#)

Quality: 406 global accepts · Rating: 2800 · first AC: 2024-04-26 · last AC: 2024-04-26 · C++20 (GCC 13-64) (first AC) · Tags: dp, games

[Zachary_Gao's solution](#)

482.

850F

[Rainbow Balls](#) · [Tutorial](#)

Quality: 762 global accepts · Rating: 2800 · first AC: 2024-04-18 · C++20 (GCC 13-64) (first AC) · Tags: math

[Zachary_Gao's solution](#)

483.

908G

[New Year and Original Order](#) · [Tutorial](#)

Quality: 1,674 global accepts · Rating: 2800 · first AC: 2024-01-16 · last AC: 2024-01-17 · C++20 (GCC 11-64) (first AC) · Tags: dp, math

[Zachary_Gao's solution](#)

484.

1919F2

[Wine Factory \(Hard Version\)](#) · [Tutorial](#)

Quality: 1,086 global accepts · Rating: 2800 · first AC: 2024-01-08 · last AC: 2024-01-08 · C++20 (GCC 11-64) (first AC) · Tags: data structures, dp, flows, greedy, matrices

[Zachary_Gao's solution](#)

485.

1386C

[Joker](#) · [Tutorial](#)

Quality: 656 global accepts · Rating: 2800 · first AC: 2023-11-27 · C++20 (GCC 11-64) (first AC) · Tags: *special, bitmasks, data structures, divide and conquer, dsu

[Zachary_Gao's solution](#)

486.

1155F

[Delivery Oligopoly](#) · [Tutorial](#)

Quality: 517 global accepts · Rating: 2800 · first AC: 2023-08-20 · last AC: 2023-08-20 · C++14 (GCC 6-32) (first AC) · Tags: brute force, dp, graphs

[Zachary_Gao's solution](#)

487.

283E

[Cow Tennis Tournament](#) · [Tutorial](#)

Quality: 856 global accepts · Rating: 2800 · first AC: 2023-08-02 · last AC: 2023-08-02 · C++14 (GCC 6-32) (first AC) · Tags: combinatorics, data structures, math

[Zachary_Gao's solution](#)

488.

555E

[Case of Computer Network](#) · [Tutorial](#)

Quality: 2,969 global accepts · Rating: 2800 · first AC: 2023-07-12 · last AC: 2023-07-12 · C++20 (GCC 11-64) (first AC) · Tags: dfs and similar, graphs, trees

[Zachary_Gao's solution](#)

489.

1528E

[Mashtali and Hagh Trees](#) · [Tutorial](#)

Quality: 601 global accepts · Rating: 2900 · first AC: 2026-03-05 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, trees

[Zachary_Gao's solution](#)

490.

1768F

[Wonderful Jump](#) · [Tutorial](#)

Quality: 1,226 global accepts · Rating: 2900 · first AC: 2026-02-13 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy

[Zachary_Gao's solution](#)

491.

1129D

[Isolation](#) · [Tutorial](#)

Quality: 1,308 global accepts · Rating: 2900 · first AC: 2025-12-02 · last AC: 2025-12-02 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dp

[Zachary_Gao's solution](#)

492.

2164F2

[Chain Prefix Rank \(Hard Version\)](#) · [Tutorial](#)

Quality: 423 global accepts · Rating: 2900 · first AC: 2025-11-07 · C++20 (GCC 13-64) (first AC) · Tags: binary search, combinatorics, data structures, dfs and similar, dp, graphs, math, trees

[Zachary_Gao's solution](#)

493.

2115D

[Gellyfish and Forget-Me-Not](#) · [Tutorial](#)

Quality: 1,101 global accepts · Rating: 2900 · first AC: 2025-06-01 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, dp, games, greedy, math

[Zachary_Gao's solution](#)

494.

1646F

[Playing Around the Table](#) · [Tutorial](#)

Quality: 673 global accepts · Rating: 2900 · first AC: 2024-07-09 · last AC: 2024-07-09 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, greedy, implementation

[Zachary_Gao's solution](#)

495.

708D

[Incorrect Flow](#) · [Tutorial](#)

Quality: 887 global accepts · Rating: 2900 · first AC: 2024-01-13 · last AC: 2024-01-13 · C++17 (GCC 9-64) (first AC) · Tags: flows

[Zachary_Gao's solution](#)

496.

226E

[Noble Knight's Path](#) · [Tutorial](#)

Quality: 548 global accepts · Rating: 2900 · first AC: 2023-07-14 · last AC: 2023-07-14 · C++20 (GCC 11-64) (first AC) · Tags: data structures, trees

[Zachary_Gao's solution](#)

497.

19E

[Fairy](#) · [Tutorial](#)

Quality: 2,513 global accepts · Rating: 2900 · first AC: 2023-07-12 · last AC: 2023-07-12 · C++20 (GCC 11-64) (first AC) · Tags: dfs and similar, divide and conquer, dsu

[Zachary_Gao's solution](#)

498.

1707D

[Partial Virtual Trees](#) · [Tutorial](#)

Quality: 891 global accepts · Rating: 3000 · first AC: 2026-02-26 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dfs and similar, dp, math, trees

[Zachary_Gao's solution](#)

499.

457E

[Flow Optimality](#) · [Tutorial](#)

Quality: 121 global accepts · Rating: 3000 · first AC: 2025-12-29 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, flows, math

[Zachary_Gao's solution](#)

500.

843E

[Maximum Flow](#) · [Tutorial](#)

Quality: 473 global accepts · Rating: 3000 · first AC: 2025-12-19 · C++20 (GCC 13-64) (first AC) · Tags: flows, graphs

[Zachary_Gao's solution](#)

501.

573D

[Bear and Cavalry](#) · [Tutorial](#)

Quality: 707 global accepts · Rating: 3000 · first AC: 2025-12-02 · last AC: 2025-12-02 · C++20 (GCC 13-64) (first AC) · Tags: data structures, divide and conquer, dp

[Zachary_Gao's solution](#)

502.

1181E2

[A Story of One Country \(Hard\)](#) · [Tutorial](#)

Quality: 398 global accepts · Rating: 3000 · first AC: 2025-11-25 · last AC: 2025-11-25 · C++20 (GCC 13-64) (first AC) · Tags: brute force, greedy, sortings

[Zachary_Gao's solution](#)

503.

1381D

[The Majestic Brown Tree Snake](#) · [Tutorial](#)

Quality: 825 global accepts · Rating: 3000 · first AC: 2025-11-13 · C++20 (GCC 13-64) (first AC) · Tags: dfs and similar, dp, greedy, trees, two pointers

[Zachary_Gao's solution](#)

504.

1267G

[Game Relics](#) · [Tutorial](#)

Quality: 826 global accepts · Rating: 3000 · first AC: 2025-05-21 · C++20 (GCC 13-64) (first AC) · Tags: math, probabilities

[Zachary_Gao's solution](#)

505.

1844G

[Tree Weights](#) · [Tutorial](#)

Quality: 1,184 global accepts · Rating: 3000 · first AC: 2025-02-17 · last AC: 2025-02-17 · C++23 (GCC 14-64, msys2) (first AC) · Tags: bitmasks, constructive algorithms, data structures, dfs and similar, implementation, math, matrices, number theory, tre...

[Zachary_Gao's solution](#)

506.

1975G

[Zimpha Fan Club](#) · [Tutorial](#)

Quality: 342 global accepts · Rating: 3000 · first AC: 2025-02-06 · last AC: 2025-02-06 · C++23 (GCC 14-64, msys2) (first AC) · Tags: fft, greedy, math, strings

[Zachary_Gao's solution](#)

507.

1097G

[Vladislav and a Great Legend](#) · [Tutorial](#)

Quality: 1,054 global accepts · Rating: 3000 · first AC: 2025-01-04 · last AC: 2025-01-04 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, trees

[Zachary_Gao's solution](#)

508.

891E

[Lust](#) · [Tutorial](#)

Quality: 1,120 global accepts · Rating: 3000 · first AC: 2024-04-08 · last AC: 2024-04-08 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, math, matrices

[Zachary_Gao's solution](#)

509.

150E

[Freezing with Style](#) · [Tutorial](#)

Quality: 1,034 global accepts · Rating: 3000 · first AC: 2023-11-13 · last AC: 2023-11-13 · C++20 (GCC 11-64) (first AC) · Tags: binary search, data structures, divide and conquer, trees

[Zachary_Gao's solution](#)

510.

914F

[Substrings in a String](#) · [Tutorial](#)

Quality: 2,142 global accepts · Rating: 3000 · first AC: 2023-07-16 · C++20 (GCC 11-64) (first AC) · Tags: bitmasks, brute force, data structures, string suffix structures, strings

[Zachary_Gao's solution](#)

511.

264E

[Roadside Trees](#) · [Tutorial](#)

Quality: 469 global accepts · Rating: 3000 · first AC: 2023-07-09 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: data structures, dp

[Zachary_Gao's solution](#)

512.

319E

[Ping-Pong](#) · [Tutorial](#)

Quality: 739 global accepts · Rating: 3000 · first AC: 2023-07-10 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

513.

720F

[Array Covering](#) · [Tutorial](#)

Quality: 206 global accepts · Rating: 3100 · first AC: 2026-02-17 · last AC: 2026-02-21 · C++20 (GCC 13-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

514.

571D

[Campus](#) · [Tutorial](#)

Quality: 808 global accepts · Rating: 3100 · first AC: 2026-02-01 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, dsu, trees

[Zachary_Gao's solution](#)

515.

1895G

[Two Characters, Two Colors](#) · [Tutorial](#)

Quality: 324 global accepts · Rating: 3100 · first AC: 2026-01-13 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures, dp, flows, greedy

[Zachary_Gao's solution](#)

516.

925F

[Parametric Circulation](#) · [Tutorial](#)

Quality: 168 global accepts · Rating: 3100 · first AC: 2024-12-13 · last AC: 2025-12-16 · C++20 (GCC 13-64) (first AC) · Tags: binary search, flows

[Zachary_Gao's solution](#)

517.

1210F1

[Marek and Matching \(easy version\)](#) · [Tutorial](#)

Quality: 351 global accepts · Rating: 3100 · first AC: 2025-11-04 · C++20 (GCC 13-64) (first AC) · Tags: brute force, probabilities

[Zachary_Gao's solution](#)

518.

666E

[Forensic Examination](#) · [Tutorial](#)

Quality: 1,562 global accepts · Rating: 3100 · first AC: 2025-02-01 · last AC: 2025-02-01 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, string suffix structures

[Zachary_Gao's solution](#)

519.

1481F

[AB Tree](#) · [Tutorial](#)

Quality: 737 global accepts · Rating: 3100 · first AC: 2025-01-04 · last AC: 2025-01-05 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy, trees

[Zachary_Gao's solution](#)

520.

704D

[Captain America](#) · [Tutorial](#)

Quality: 1,010 global accepts · Rating: 3100 · first AC: 2024-01-13 · last AC: 2024-01-13 · C++20 (GCC 11-64) (first AC) · Tags: flows, greedy

[Zachary_Gao's solution](#)

521.

1603E

[A Perfect Problem](#) · [Tutorial](#)

Quality: 641 global accepts · Rating: 3200 · first AC: 2026-02-09 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, math

[Zachary_Gao's solution](#)

522.

1349D

[Slime and Biscuits](#) · [Tutorial](#)

Quality: 1,052 global accepts · Rating: 3200 · first AC: 2026-02-02 · C++20 (GCC 13-64) (first AC) · Tags: math, probabilities

[Zachary_Gao's solution](#)

523.

1810G

[The Maximum Prefix](#) · [Tutorial](#)

Quality: 1,247 global accepts · Rating: 3200 · first AC: 2026-01-29 · C++20 (GCC 13-64) (first AC) · Tags: dp

[Zachary_Gao's solution](#)

524.

1666K

[Kingdom Partition](#) · [Tutorial](#)

Quality: 357 global accepts · Rating: 3200 · first AC: 2025-12-22 · C++20 (GCC 13-64) (first AC) · Tags: flows

[Zachary_Gao's solution](#)

525.

786E

[ALT](#) · [Tutorial](#)

Quality: 753 global accepts · Rating: 3200 · first AC: 2025-12-22 · C++20 (GCC 13-64) (first AC) · Tags: data structures, flows, graphs, trees

[Zachary_Gao's solution](#)

526.

2180F2

[Control Car \(Hard Version\)](#) · [Tutorial](#)

Quality: 223 global accepts · Rating: 3200 · first AC: 2025-12-20 · last AC: 2025-12-20 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp, matrices, probabilities

[Zachary_Gao's solution](#)

527.

1383F

[Special Edges](#) · [Tutorial](#)

Quality: 437 global accepts · Rating: 3200 · first AC: 2024-12-23 · last AC: 2025-12-15 · C++20 (GCC 13-64) (first AC) · Tags: flows, graphs

[Zachary_Gao's solution](#)

528.

730K

[Roads Orientation Problem](#) · [Tutorial](#)

Quality: 157 global accepts · Rating: 3200 · first AC: 2025-11-30 · last AC: 2025-11-30 · C++20 (GCC 13-64) (first AC) · Tags: graphs

[Zachary_Gao's solution](#)

529.

765G

[Math, math everywhere](#) · [Tutorial](#)

Quality: 116 global accepts · Rating: 3200 · first AC: 2025-11-13 · last AC: 2025-11-13 · C++20 (GCC 13-64) (first AC) · Tags: brute force, dp, math, meet-in-the-middle, number theory

[Zachary_Gao's solution](#)

530.

1210F2

[Marek and Matching \(hard version\)](#) · [Tutorial](#)

Quality: 430 global accepts · Rating: 3200 · first AC: 2025-11-04 · last AC: 2025-11-04 · C++20 (GCC 13-64) (first AC) · Tags: brute force, probabilities

[Zachary_Gao's solution](#)

531.

1859F

[Teleportation in Byteland](#) · [Tutorial](#)

Quality: 524 global accepts · Rating: 3200 · first AC: 2025-10-18 · C++20 (GCC 13-64) (first AC) · Tags: data structures, dfs and similar, divide and conquer, graphs, shortest paths, trees

[Zachary_Gao's solution](#)

532.

2159D2

[Inverse Minimum Partition \(Hard Version\)](#) · [Tutorial](#)

Quality: 395 global accepts · Rating: 3200 · first AC: 2025-10-13 · C++20 (GCC 13-64) (first AC) · Tags: dp, greedy, math

[Zachary_Gao's solution](#)

533.

827F

[Dirty Arkady's Kitchen](#) · [Tutorial](#)

Quality: 582 global accepts · Rating: 3200 · first AC: 2025-02-04 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, dp, graphs, shortest paths

[Zachary_Gao's solution](#)

534.

2039F2

[Shohag Loves Counting \(Hard Version\) · Tutorial](#)

Quality: 288 global accepts · Rating: 3200 · first AC: 2024-12-05 · C++20 (GCC 13-64) (first AC) · Tags: dp, number theory

[Zachary_Gao's solution](#)

535.

1656G

[Cycle Palindrome · Tutorial](#)

Quality: 462 global accepts · Rating: 3200 · first AC: 2024-07-10 · last AC: 2024-07-10 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, graphs, math

[Zachary_Gao's solution](#)

536.

1656H

[Equal LCM Subsets · Tutorial](#)

Quality: 796 global accepts · Rating: 3200 · first AC: 2024-07-08 · last AC: 2024-07-08 · C++20 (GCC 13-64) (first AC) · Tags: data structures, math, number theory

[Zachary_Gao's solution](#)

537.

755G

[PolandBall and Many Other Balls · Tutorial](#)

Quality: 1,024 global accepts · Rating: 3200 · first AC: 2024-04-29 · last AC: 2024-04-29 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, divide and conquer, dp, fft, math, number theory

[Zachary_Gao's solution](#)

538.

645G

[Armistice Area Apportionment · Tutorial](#)

Quality: 128 global accepts · Rating: 3200 · first AC: 2024-04-18 · last AC: 2024-04-18 · C++20 (GCC 13-64) (first AC) · Tags: binary search, geometry

[Zachary_Gao's solution](#)

539.

578F

[Mirror Box · Tutorial](#)

Quality: 650 global accepts · Rating: 3200 · first AC: 2024-03-18 · last AC: 2024-03-18 · C++17 (GCC 7-32) (first AC) · Tags: matrices, trees

[Zachary_Gao's solution](#)

540.

487E

[Tourists · Tutorial](#)

Quality: 2,839 global accepts · Rating: 3200 · first AC: 2023-07-10 · last AC: 2023-07-11 · C++14 (GCC 6-32) (first AC) · Tags: data structures, dfs and similar, graphs, trees

[Zachary_Gao's solution](#)

541.

725G

[Messages on a Tree · Tutorial](#)

Quality: 180 global accepts · Rating: 3300 · first AC: 2026-01-26 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

542.

1517G

[Starry Night Camping · Tutorial](#)

Quality: 710 global accepts · Rating: 3300 · first AC: 2025-12-16 · last AC: 2025-12-16 · C++20 (GCC 13-64) (first AC) · Tags: constructive algorithms, flows, graphs

[Zachary_Gao's solution](#)

543.

1427G

[One Billion Shades of Grey · Tutorial](#)

Quality: 497 global accepts · Rating: 3300 · first AC: 2024-12-25 · last AC: 2025-12-16 · C++20 (GCC 13-64) (first AC) · Tags: flows, graphs

[Zachary_Gao's solution](#)

544.

1804H

[Code Lock](#) · [Tutorial](#)

Quality: 245 global accepts · Rating: 3300 · first AC: 2025-11-25 · last AC: 2025-11-25 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, dp

[Zachary_Gao's solution](#)

545.

1556G

[Gates to Another World](#) · [Tutorial](#)

Quality: 446 global accepts · Rating: 3300 · first AC: 2025-10-19 · C++20 (GCC 13-64) (first AC) · Tags: bitmasks, data structures, dsu, two pointers

[Zachary_Gao's solution](#)

546.

1558F

[Strange Sort](#) · [Tutorial](#)

Quality: 511 global accepts · Rating: 3300 · first AC: 2025-10-19 · C++20 (GCC 13-64) (first AC) · Tags: data structures, sortings

[Zachary_Gao's solution](#)

547.

878E

[Numbers on the blackboard](#) · [Tutorial](#)

Quality: 737 global accepts · Rating: 3300 · first AC: 2024-10-11 · last AC: 2024-10-11 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, dp

[Zachary_Gao's solution](#)

548.

1270H

[Number of Components](#) · [Tutorial](#)

Quality: 1,005 global accepts · Rating: 3300 · first AC: 2024-07-08 · last AC: 2024-07-08 · C++20 (GCC 13-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

549.

1416F

[Showing Off](#) · [Tutorial](#)

Quality: 603 global accepts · Rating: 3300 · first AC: 2024-01-13 · last AC: 2024-01-13 · C++20 (GCC 11-64) (first AC) · Tags: flows, graph matchings, greedy, implementation

[Zachary_Gao's solution](#)

550.

1553I

[Stairs](#) · [Tutorial](#)

Quality: 314 global accepts · Rating: 3400 · first AC: 2026-02-26 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, divide and conquer, dp, fft, math

[Zachary_Gao's solution](#)

551.

1010F

[Tree](#) · [Tutorial](#)

Quality: 261 global accepts · Rating: 3400 · first AC: 2026-02-15 · last AC: 2026-02-16 · C++20 (GCC 13-64) (first AC) · Tags: fft, graphs, trees

[Zachary_Gao's solution](#)

552.

1630F

[Making It Bipartite](#) · [Tutorial](#)

Quality: 919 global accepts · Rating: 3400 · first AC: 2023-12-29 · last AC: 2025-12-29 · C++20 (GCC 11-64) (first AC) · Tags: flows, graph matchings, graphs, number theory

[Zachary_Gao's solution](#)

553.

2180H1

[Bug Is Feature \(Unconditional Version\)](#) · [Tutorial](#)

Quality: 120 global accepts · Rating: 3400 · first AC: 2025-12-21 · last AC: 2025-12-21 · C++20 (GCC 13-64) (first AC) · Tags: games

[Zachary_Gao's solution](#)

554.

757G

[Can Bash Save the Day? · Tutorial](#)

Quality: 648 global accepts · Rating: 3400 · first AC: 2025-12-08 · last AC: 2025-12-08 · C++20 (GCC 13-64) (first AC) · Tags: data structures, divide and conquer, graphs, trees

[Zachary_Gao's solution](#)

555.

1693E

[Outermost Maximums · Tutorial](#)

Quality: 558 global accepts · Rating: 3400 · first AC: 2025-11-15 · C++20 (GCC 13-64) (first AC) · Tags: data structures, greedy

[Zachary_Gao's solution](#)

556.

1801G

[A task for substrings · Tutorial](#)

Quality: 709 global accepts · Rating: 3400 · first AC: 2025-08-27 · last AC: 2025-08-27 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, string suffix structures, strings

[Zachary_Gao's solution](#)

557.

1266H

[Red-Blue Graph · Tutorial](#)

Quality: 132 global accepts · Rating: 3400 · first AC: 2025-06-25 · C++20 (GCC 13-64) (first AC) · Tags: dp, graphs, math, matrices, meet-in-the-middle

[Zachary_Gao's solution](#)

558.

1442F

[Differentiating Games · Tutorial](#)

Quality: 170 global accepts · Rating: 3400 · first AC: 2025-05-28 · C++20 (GCC 13-64) (first AC) · Tags: games, interactive

[Zachary_Gao's solution](#)

559.

1710D

[Recover the Tree · Tutorial](#)

Quality: 560 global accepts · Rating: 3400 · first AC: 2025-02-17 · C++23 (GCC 14-64, msys2) (first AC) · Tags: constructive algorithms, trees

[Zachary_Gao's solution](#)

560.

1276F

[Asterisk Substrings · Tutorial](#)

Quality: 447 global accepts · Rating: 3400 · first AC: 2025-02-02 · C++23 (GCC 14-64, msys2) (first AC) · Tags: string suffix structures

[Zachary_Gao's solution](#)

561.

1039E

[Summer Oenothera Exhibition · Tutorial](#)

Quality: 319 global accepts · Rating: 3400 · first AC: 2025-01-07 · last AC: 2025-01-08 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

562.

1784F

[Minimums or Medians · Tutorial](#)

Quality: 364 global accepts · Rating: 3400 · first AC: 2024-09-24 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

563.

1693F

[I Might Be Wrong · Tutorial](#)

Quality: 615 global accepts · Rating: 3400 · first AC: 2024-07-10 · last AC: 2024-07-10 · C++20 (GCC 13-64) (first AC) · Tags: binary search, greedy, two pointers

[Zachary_Gao's solution](#)

564.

2115F2

[Gellyfish and Lycoris Radiata \(Hard Version\)](#) · [Tutorial](#)

Quality: 109 global accepts · Rating: 3500 · first AC: 2025-06-03 · last AC: 2026-02-21 · C++20 (GCC 13-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

565.

1158F

[Density of subarrays](#) · [Tutorial](#)

Quality: 504 global accepts · Rating: 3500 · first AC: 2026-02-14 · C++20 (GCC 13-64) (first AC) · Tags: dp, math

[Zachary_Gao's solution](#)

566.

1086F

[Forest Fires](#) · [Tutorial](#)

Quality: 316 global accepts · Rating: 3500 · first AC: 2025-12-25 · C++20 (GCC 13-64) (first AC) · Tags: math

[Zachary_Gao's solution](#)

567.

2127G2

[Inter Active \(Hard Version\)](#) · [Tutorial](#)

Quality: 107 global accepts · Rating: 3500 · first AC: 2025-12-23 · C++20 (GCC 13-64) (first AC) · Tags: binary search, bitmasks, constructive algorithms, graphs, implementation, interactive, math, probabilities

[Zachary_Gao's solution](#)

568.

1178H

[Stock Exchange](#) · [Tutorial](#)

Quality: 298 global accepts · Rating: 3500 · first AC: 2024-12-12 · last AC: 2025-12-22 · C++20 (GCC 13-64) (first AC) · Tags: binary search, flows, graphs

[Zachary_Gao's solution](#)

569.

1290F

[Making Shapes](#) · [Tutorial](#)

Quality: 591 global accepts · Rating: 3500 · first AC: 2025-12-05 · C++20 (GCC 13-64) (first AC) · Tags: dp

[Zachary_Gao's solution](#)

570.

1586I

[Omkar and Mosaic](#) · [Tutorial](#)

Quality: 298 global accepts · Rating: 3500 · first AC: 2025-11-18 · C++20 (GCC 13-64) (first AC) · Tags: combinatorics, constructive algorithms, math

[Zachary_Gao's solution](#)

571.

1110H

[Modest Substrings](#) · [Tutorial](#)

Quality: 435 global accepts · Rating: 3500 · first AC: 2025-11-10 · C++20 (GCC 13-64) (first AC) · Tags: dp, strings

[Zachary_Gao's solution](#)

572.

2115F1

[Gellyfish and Lycoris Radiata \(Easy Version\)](#) · [Tutorial](#)

Quality: 119 global accepts · Rating: 3500 · first AC: 2025-06-12 · C++20 (GCC 13-64) (first AC) · Tags: data structures

[Zachary_Gao's solution](#)

573.

2115E

[Gellyfish and Mayflower](#) · [Tutorial](#)

Quality: 236 global accepts · Rating: 3500 · first AC: 2025-06-02 · C++20 (GCC 13-64) (first AC) · Tags: dp, graphs

[Zachary_Gao's solution](#)

574.

1608G

[Alphabetic Tree](#) · [Tutorial](#)

Quality: 245 global accepts · Rating: 3500 · first AC: 2025-01-29 · last AC: 2025-01-29 · C++23 (GCC 14-64, msys2) (first AC) · Tags: binary search, data structures, dfs and similar, hashing, string suffix structures, strings, trees

[Zachary_Gao's solution](#)

575.

1621I

[Two Sequences](#) · [Tutorial](#)

Quality: 144 global accepts · Rating: 3500 · first AC: 2025-01-25 · C++23 (GCC 14-64, msys2) (first AC) · Tags: data structures, hashing, string suffix structures

[Zachary_Gao's solution](#)

576.

1707E

[Replace](#) · [Tutorial](#)

Quality: 936 global accepts · Rating: 3500 · first AC: 2024-10-16 · C++20 (GCC 13-64) (first AC) · Tags: binary search, data structures

[Zachary_Gao's solution](#)

577.

1270I

[Xor on Figures](#) · [Tutorial](#)

Quality: 317 global accepts · Rating: 3500 · first AC: 2023-08-21 · last AC: 2023-08-21 · C++14 (GCC 6-32) (first AC) · Tags: constructive algorithms, fft, math

[Zachary_Gao's solution](#)

578.

104013K

[Keys and Locks Boolean Logic](#) · [Tutorial](#)

Rating: — · first AC: 2025-12-15 · last AC: 2025-12-15 · PyPy 3-64 (first AC) · Tags: —

[Zachary_Gao's solution](#)

579.

undefined429

[Problem Stacks](#) · [Tutorial](#)

Rating: — · first AC: 2025-01-02 · C++20 (GCC 13-64) (first AC) · Tags: *special

[Zachary_Gao's solution](#)

580.

392C

[Yet Another Number Sequence](#) · [Tutorial](#)

Quality: 677 global accepts · Rating: — · first AC: 2024-03-25 · last AC: 2024-07-02 · C++17 (GCC 7-32) (first AC) · Tags: combinatorics, math, matrices

[Zachary_Gao's solution](#)

581.

104901B

[Graph Partitioning 2](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

582.

104901E

[I Just Want... One More...](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

583.

104901G

[Gifts from Knowledge](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

584.

104901M

[Almost Convex](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

585.

104901K

[Rainbow Subarray](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

586.

104901A

[Many Many Heads](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

587.

104901I

[Strange Sorting](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

588.

104901D

[Largest Digit](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-14 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

589.

104976F

[Top Cluster](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

590.

104976H

[Sugar Sweet II](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

591.

104976G

[Snake Move](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

592.

104976D

[Operator Precedence](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

593.

104976J

[Mysterious Tree](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

594.

104976M

[V-Diagram](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

595.

101196J

[Yes, Yes, It's Nonograms](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

596.

101174D

[Dinner Bet](#) · [Tutorial](#)

Rating: — · first AC: 2024-06-03 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

597.

101002D

[Programming Team](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-12 · last AC: 2024-03-12 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

598.

102219E

[Optimal Slots](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-12 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

599.

101617J

[Treasure Map](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-12 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

600.

101656G

[Saruman's Level Up](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-12 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

601.

102576K

[To argue, or not to argue](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-12 · last AC: 2024-03-12 · C++17 (GCC 7-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

602.

100222C

[Decoding Martian Messages](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

603.

100217I

[Sharing the Sweets](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

604.

104172F

[Sum of Numbers](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-11 · C++20 (GCC 13-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

605.

101982D

[Count The Bits](#) · [Tutorial](#)

Rating: — · first AC: 2024-03-11 · C++20 (GCC 11-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)

606.

102538H

[Horrible Cycles](#) · [Tutorial](#)

Rating: — · first AC: 2023-08-04 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

607.

undefined134

[Centroid](#) · [Tutorial](#)

Rating: — · first AC: 2023-07-30 · C++14 (GCC 6-32) (first AC) · Tags: *special

[Zachary_Gao's solution](#)

608.

undefined143

[Long Live the Queen](#) · [Tutorial](#)

Rating: — · first AC: 2023-07-30 · C++14 (GCC 6-32) (first AC) · Tags: —

[Zachary_Gao's solution](#)

609.

100739E

[Life as a Monster](#) · [Tutorial](#)

Rating: — · first AC: 2023-07-24 · C++20 (GCC 11-64) (first AC) · Tags: —

[Zachary_Gao's solution](#)