KNAPSACK PROBLEM 0-1 - ALGORITHMS

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1 Abstract

The problem of backpack 0-1 is a problem of finding optimal algorithms for storing data in each backpack without escaping its maximum capacity. In this work, an attempt was made to capture snapshots with specific values. The resulting files were 320 in total. The following algorithms were applied to them:

- 1. Greedy method
- 2. Comprehensive list of combinations
- 3.Branching and blocking
- 4. Dynamic Programming
- 5.Integer programming
- 6.Specialist solver

2 The results of the random files and algorithms

Below, the results of the above algorithms are shown in the set of snapshots we created.

| File Name | TotalWeight | Total Value/profit |
|--------------------------|--------------------|--------------------|
| problem_10_50_1_1_5.txt | | 231 50 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_1_2_5.txt | | 47 46 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_1_3_5.txt | | 687 80 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_1_4_5.txt | | 1284 95 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_1_5_5.txt | _ | 1441 12 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_2_1_5.txt | J | 231 69 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_2_2_5.txt | | 326 59 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_2_3_5.txt | | 488 240 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_2_5_5.txt | Total Weight | 1441 31 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_3_1_5.txt | TotalWeight | 16 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_3_2_5.txt | Total Weight | 1 70 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_3_4_5.txt | Total Weight | 6 55 |
| File Name | TotalWeight | Total Value/profit |
| | rotat weight | - |
| problem_10_50_3_5_5.txt | TotalWoight | |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_4_1_5.txt | T-4-114/-: | 16 35 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_4_2_5.txt | T . DW . J. | 1 50 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_4_3_5.txt | - | 27 24 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_4_4_5.txt | | 6 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_4_5_5.txt | | 34 17 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_1_1_5.txt | | 381 100 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_1_2_5.txt | | 826 65 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_50_1_3_5.txt | | 0 0 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_1_3_5.txt | | 1937 130 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_1_4_5.txt | | 2634 195 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_1_5_5.txt | | 2641 112 |
| File Name | Total Weight | Total Value/profit |
| problem_10_500_2_1_5.txt | <i>L</i> | 0 0 |
| | | |

| File Name | TotalWeight | Total Value/profit |
|---------------------------------------|--------------------|-------------------------------|
| problem_10_100_2_3_5.txt | | 27 79 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_2_4_5.txt | | 56 54 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_2_5_5.txt | | 22 78 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_3_1_5.txt | | 16 95 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_3_2_5.txt | | 51 70 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_3_3_5.txt | | 27 84 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_3_4_5.txt | | 56 55 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_3_5_5.txt | _ | 34 87 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_4_1_5.txt | _ | 16 85 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_4_2_5.txt | J | 51 50 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_4_3_5.txt | | 27 74 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_4_4_5.txt | | 56 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_100_4_5_5.txt | rotat Weight | 34 67 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_1_1_5.txt | Total Weight | 1707 94 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_1_2_5.txt | TotalWeight | 4626 765 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_1_3_5.txt | Total Weight | 5037 930 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_1_4_5.txt | i otat weight | 7834 595 |
| File Name | TotalWeight | Total Value/profit |
| | i otat weight | 16841 612 |
| problem_10_500_1_5_5.txt | TotalWaight | |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_2_1_5.txt | TotalWaight | 16 513 |
| File Name problem_10_500_2_3_5.txt | TotalWeight | Total Value/profit 0 0 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_2_2_5.txt | i otat weight | 297 245 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_2_4_5.txt | i otat weight | 156 346 |
| File Name | TotalWoight | Total Value/profit |
| | TotalWeight | • |
| problem_10_500_3_1_5.txt | Total\Maiabt | 16 495 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_500_3_2_5.txt File Name | TotalWeight | 297 214 Total Value/profit |
| | 3 | 0 0 |
| problem_3_3_5.txt | | 0 |
| | | |

| File Name | Total Weight | | Total Value/profit |
|--|--------------------|-------|--------------------|
| problem_10_500_3_3_5.txt | 5 | 227 | 284 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_3_4_5.txt | | 156 | 355 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_3_5_5.txt | | 86 | 425 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_4_1_5.txt | | 16 | 485 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_4_2_5.txt | | 297 | 204 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_4_3_5.txt | | 227 | 274 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_4_4_5.txt | | 156 | 345 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_4_5_5.txt | | 86 | 415 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_1_1_5.txt | | 3881 | 600 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_1_2_5.txt | | 10626 | 1765 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_500_1_3_5.txt | | 0 | 0 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_1_3_5.txt | | 15037 | 930 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_1_4_5.txt | | 13334 | 1095 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_1_5_5.txt | | 31841 | 612 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_1_5 | | 0 | 0 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_1_5.txt | | 190 | 739 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_2_5.txt | | 349 | 677 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_3_5.txt | | 156 | 967 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_4_5.txt | | 656 | 414 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_2_5_5.txt | | 122 | 944 |
| File Name | TotalWeight | | Total Value/profit |
| problem_3_1_5.txt | | 0 | |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_3_1_5.txt | | 422 | 599 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_3_2_5.txt | | 797 | 214 |
| File Name | TotalWeight | | Total Value/profit |
| problem_10_1000_3_3_5.txt File Name | T-4-1\4/-2b | 280 | 741 |
| | Total Weight | | Total Value/profit |
| problem_10_1000_3_4_5.tx | t ' | 357 | 664 |
| | | | |

| File Name | TotalWeight | Total Value/profit |
|--------------------------------------|---------------------|--------------------|
| peoblem_10_1000_3_5_5.txt | | 0 0 |
| File Name | Total Weight | Total Value/profit |
| problem_10_1000_3_5_5.txt | | 434 587 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_1000_4_1_5.txt | | 422 599 |
| File Name | TotalWeight | Total Value/profit |
| problem_10_1000_4_2_5.txt | | 797 214 |
| File Name | Total Weight | Total Value/profit |
| problem_10_1000_4_4_5.txt | 3 | 357 664 |
| File Name | Total Weight | Total Value/profit |
| problem_10_1000_4_5_5.txt | 3 | 434 587 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_1_1_5.txt | J | 16 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_1_2_5.txt | Total Weight | 47 46 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_1_4_5.txt | Total Weight | 6 49 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_1_5_5.txt | Total Weight | 22 12 |
| File Name | TotalWeight | Total Value/profit |
| program_50_50_2_1_5.txt | TotalWeight | 0 0 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_2_1_5.txt | Total Weight | 16 39 |
| File Name | TotalWeight | Total Value/profit |
| program_50_50_2_2_5.txt | Total Weight | 0 0 |
| File Name | TotalWoight | Total Value/profit |
| | TotalWeight | 47 9 |
| problem_50_50_2_2_5.txt File Name | Total Woight | Total Value/profit |
| | TotalWeight | 6 40 |
| problem_50_50_2_3_5.txt | Total\Maight | |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_2_3_5.txt | Tatal\Maimbt | 6 40 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_2_4_5.txt | T (1)4/ : 1 (| 6 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_2_4_5.txt | - | 6 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_2_5_5.txt | | 22 31 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_3_2_5.txt | | 1 70 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_3_3_5.txt | | 27 34 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_3_4_5.txt | | 6 55 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_3_5_5.txt | | 34 37 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_4_1_5.txt | T-4-134/ 1-1: | 16 35 |
| File Name | Total Weight | Total Value/profit |
| problem_50_50_4_2_5.txt | 5 | 1 50 |

| File Name | TotalWeight | Total Value/profit |
|---------------------------------------|--------------|-------------------------------|
| problem_50_50_4_3_5.txt | | 27 24 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_50_4_4_5.txt | TatalMainht | 6 45 |
| File Name problem_50_50_4_5_5.txt | TotalWeight | Total Value/profit 34 17 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_1_1_5.txt | Total Weight | 16 94 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_1_2_5.txt | rotatweight | 49 65 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_1_3_5.txt | | 27 47 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_1_4_5.txt | J | 56 99 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_1_5_5.txt | | 22 112 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_2_1_5.txt | | 16 79 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_2_2_5.txt | | 49 47 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_2_3_5.txt | | 27 79 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_2_4_5.txt | T-4-114/-: | 6 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_2_5_5.txt File Name | Total Woight | Z2 78 |
| problem_50_100_3_1_5.txt | TotalWeight | Total Value/profit 16 95 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_3_2_5.txt | Total Weight | 51 70 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_3_3_5.txt | rotat Weight | 27 84 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_1_5.txt | J | 16 85 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_2_5.txt | | 3 98 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_3txt | | 0 0 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_3_5.txt | | 27 74 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_4_5.txt | - | 56 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_100_4_5_5.txt | TatalMainht | 34 67 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_1_1_5.txt File Name | Total Woight | 16 94 |
| problem_50_500_1_2_5.txt | TotalWeight | Total Value/profit 297 446 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_1_3_5.txt | 6 | 156 930 |
| F. 13.000_300_1_0_3.0vc | | 130 730 |

| File Name | TotalWeight | Total Value/profit |
|--|---|--|
| problem_50_500_1_4_5.txt | | 156 299 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_1_5_5.txt | T . 1144 * 1 . | 86 152 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_2_1_5.txt | T-4-114/-: | 16 513 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_2_2_5.txt | TotalWoight | 297 245 |
| File Name | TotalWeight | Total Value/profit 156 367 |
| problem_50_500_2_3_5.txt File Name | TotalWoight | |
| problem_50_500_2_4_5.txt | TotalWeight | Total Value/profit 156 346 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_2_5_5.txt | rotat weight | 86 430 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_3_1_5.txt | Totatweight | 16 495 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_3_3_5.txt | rotativeigne | 227 284 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_3_4_5.txt | rotat Weight | 156 355 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_3_5_5.txt | | 86 425 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_4_1_5.txt | | 16 485 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_4_2_5.txt | 3 | 297 204 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_500_4_3_5.txt | J | 227 274 |
| File Name | T . 1344 . 1 . | T-4-1 V-1 / 6:4 |
| | TotalWeight | rotal value/profit |
| problem_50_500_4_4_5.txt | l otal Weight | Total Value/profit 156 345 |
| problem_50_500_4_4_5.txt File Name | Total Weight Total Weight | |
| | - | 156 345 |
| File Name | - | 156 345 Total Value/profit |
| File Name problem_50_500_4_5_5.txt | TotalWeight | 156 345 Total Value/profit 86 415 |
| File Name problem_50_500_4_5_5.txt File Name | TotalWeight | 156 345 Total Value/profit 86 415 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt | Total Weight Total Weight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name | Total Weight Total Weight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt | Total Weight Total Weight Total Weight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name | Total Weight Total Weight Total Weight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name | Total Weight Total Weight Total Weight Total Weight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt File Name | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt File Name problem_50_1000_4_1_5.txt | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | 156 345 Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 Total Value/profit 422 579 |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt File Name problem_50_1000_4_1_5.txt File Name problem_50_1000_4_1_5.txt File Name | TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight TotalWeight | Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 Total Value/profit 422 579 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt File Name problem_50_1000_4_1_5.txt File Name problem_50_1000_4_1_5.txt File Name problem_50_1000_4_2_5.txt | TotalWeight | Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 Total Value/profit 422 579 Total Value/profit 422 579 Total Value/profit |
| File Name problem_50_500_4_5_5.txt File Name problem_50_1000_1_1_5.txt File Name problem_50_1000_1_2_5.txt File Name problem_50_1000_1_3_5.txt File Name problem_50_1000_1_4_5.txt File Name problem_50_1000_1_5_5.txt File Name problem_50_1000_3_5_5.txt File Name problem_50_1000_4_1_5.txt File Name problem_50_1000_4_1_5.txt File Name | TotalWeight | Total Value/profit 86 415 Total Value/profit 190 600 Total Value/profit 349 1765 Total Value/profit 156 930 Total Value/profit 656 299 Total Value/profit 122 612 Total Value/profit 434 587 Total Value/profit 422 579 Total Value/profit |

| File Name | TotalWeight | Total Value/profit |
|--|---------------------|-----------------------------|
| problem_50_1000_4_4_5.txt | | 357 644 |
| File Name | TotalWeight | Total Value/profit |
| problem_50_1000_4_5_5.txt | | 434 567 |
| File Name | Total Weight | Total Value/profit |
| problem_100_50_1_1_5.txt | · otal // o.g | 16 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_1_2_5.txt | Totatweight | 47 46 |
| | T-4-114/-: | ** |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_1_3_5.txt | | 6 80 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_1_4_5.txt | | 6 49 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_1_5_5.txt | | 22 12 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_2_1_5.txt | _ | 16 39 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_2_2_5.txt | | 47 9 |
| File Name | TotalWeight | Total Value/profit |
| | Totatweight | 6 40 |
| problem_100_50_2_3_5.txt | T-4-114/-: | |
| File Name | Total Weight | Total Value/profit |
| problem_100_50_2_4_5.txt | | 6 44 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_2_5_5.txt | | 22 31 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_3_1_5.txt | | 16 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_3_2_5.txt | _ | 1 70 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_3_3_5.txt | | 27 34 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_3_4_5.txt | rotatweight | 6 55 |
| | TotalWoight | |
| File Name | Total Weight | Total Value/profit |
| problem_100_50_3_5_5.txt | T . DW . L. | 34 37 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_4_1_5.txt | | 16 35 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_4_2_5.txt | | 1 5 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_4_3_5.txt | | 27 24 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_4_4_5.txt | J | 6 45 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_50_4_5_5.txt | rotativeignt | 34 17 |
| File Name | TotalWeight | Total Value/profit |
| | i otat weight | • |
| problem_100_100_1_1_5.txt | T-4-114/. 1 4 4 | 16 94 |
| File Name | TotalWeight | Total Value/profit |
| problem_100_100_1_2_5.txt File Name | TotalWeight | 49 65 Total Value/profit |
| | Q - | • |
| problem_100_100_1_3_5.txt | | 27 47 |

| File Name | Total Weight | Total Value/profit |
|--|--------------|-----------------------------|
| problem_100_100_1_4_5.txt File Name | Total Weight | 56 99 Total Value/profit |
| problem_100_100_1_5_5.txt | Total Weight | 22 112 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_2_1_5.txt | | 16 79 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_2_2_5.txt | | 49 47 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_2_3_5.txt | Takal Wataba | 27 79 |
| File Name problem_100_100_2_4_5.txt | Total Weight | Total Value/profit 56 54 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_2_5_5.txt | Total Weight | 22 78 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_3_1_5.txt | J | 16 95 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_3_2_5.txt | | 51 70 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_3_3_5.txt | - | 27 84 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_3_4_5.txt File Name | Total Woight | 56 55 |
| problem_100_100_3_5_5.txt | Total Weight | Total Value/profit 34 87 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_4_1_5.txt | Total Weight | 16 85 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_4_2_5.txt | - | 51 50 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_4_3_5.txt | | 27 74 |
| File Name | Total Weight | Total Value/profit |
| problem_100_100_4_4_5.txt | Takal Wataba | 56 45 |
| File Name problem_100_100_4_5_5.txt | Total Weight | Total Value/profit 34 67 |
| File Name | Total Weight | Total Value/profit |
| problem_100-500_2_4_5.txt | Total Weight | 0 0 |
| F | | - |

| | | otal Weight |
|--------------------------------|---------------------|-------------|
| | lem_10_50_1_1_5.txt | 35 |
| - | | otal Weight |
| | lem_10_50_1_2_5.txt | 4 |
| - | | otal Weight |
| | lem_10_50_1_3_5.txt | 24 |
| | | otal Weight |
| | lem_10_50_1_3_5.txt | 24 |
| - | | otal Weight |
| 1396854338 prob | lem_10_50_1_4_5.txt | 45 |
| - | | otal Weight |
| 1396854338 prob | lem_10_50_1_4_5.txt | 45 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_1_5_5.txt | 15 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_2_1_5.txt | 35 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_2_2_5.txt | 4 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_2_3_5.txt | 24 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_2_4_5.txt | 45 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_2_5_5.txt | 15 |
| | | otal Weight |
| | lem_10_50_3_1_5.txt | 35 |
| Best first BNB Programmic File | Name To | otal Weight |
| 1396854338 prob | lem_10_50_3_2_5.txt | 4 |
| | | otal Weight |
| _ | lem_10_50_3_3_5.txt | 24 |
| | | otal Weight |
| = | lem_10_50_3_4_5.txt | 0 |
| | | |

| Best first BNB Programmic File Name | Total Weight | 45 |
|---|----------------|-----|
| 1396854338 problem_10_50_3_5_5.txt | Total Woight | 15 |
| Best first BNB Programmic File Name 1396854338 problem_10_50_4_1_5.txt | Total Weight | 35 |
| Best first BNB Programmic File Name | Total Weight | 33 |
| 1396854338 problem_10_50_4_2_5.txt | Total Weight | 4 |
| Best first BNB Programmic File Name | Total Weight | • |
| 1396854338 problem_10_50_4_3_5.txt | rotat Weight | 24 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_50_4_4_5.txt | . otal Wolging | 45 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_50_4_5_5.txt | 3 - | 15 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_1_1_5.txt | 3 | 85 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_200_1_2_5.txt | J | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_1_3_5.txt | _ | 74 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_1_4_5.txt | | 45 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_1_5_5.txt | | 15 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_2_1_5.txt | | 85 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_2_2_5.txt | | 4 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_2_3_5.txt | | 74 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_2_4_5.txt | | 45 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_2_5_5.txt | | 15 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_3_1_5.txt | | 85 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_3_2_5.txt | - | 4 |
| Best first BNB Programmic File Name | Total Weight | 7.4 |
| 1396854338 problem_10_100_3_3_5.txt | T . 134 . 1 . | 74 |
| Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_10_100_3_4_5.txt | T-+- \\/-:- | 0 |
| Best first BNB Programmic File Name | Total Weight | 15 |
| 1396854338 problem_10_100_3_5_5.txt | Total Weight | 15 |
| Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_10_100_4_1_5.txt Best first BNB Programmic File Name | Total Weight | U |
| Best first BNB Programmic File Name 1396854338 problem_10_100_4_2_5.txt | Total Weight | 0 |
| Best first BNB Programmic File Name | Total Weight | J |
| 1396854338 problem_10_100_4_3_5.txt | . otal meight | 0 |
| Best first BNB Programmic File Name | Total Weight | ŭ |
| 1396854338 problem_10_100_4_4_5.txt | | 0 |
| - | | |

| Best first BNB Programmic File Name | Total Weight | |
|--|---------------|------|
| 1396854338 problem_10_100_4_5_5.txt | T . 134 . 1 . | 0 |
| Best first BNB Programmic File Name | Total Weight | 405 |
| 1396854338 problem_10_500_1_1_5.txt | T-4-1 \\/-: | 485 |
| Best first BNB Programmic File Name | Total Weight | 204 |
| 1396854338 problem_10_500_1_2_5.txt | Tatal Mainh | 204 |
| Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_10_500_1_3_5.txt | Total Waight | 0 |
| Best first BNB Programmic File Name | Total Weight | 245 |
| 1396854338 problem_10_500_1_4_5.txt Best first BNB Programmic File Name | Total Waight | 345 |
| 1396854338 problem_10_500_1_5_5.txt | Total Weight | 415 |
| | Total Weight | 413 |
| Best first BNB Programmic File Name 1396854338 problem_10_500_2_1_5.txt | Total Weight | 485 |
| Best first BNB Programmic File Name | Total Weight | 403 |
| 1396854338 problem_10_500_2_2_5.txt | Total Weight | 204 |
| Best first BNB Programmic File Name | Total Weight | 207 |
| 1396854338 problem_10_500_2_3_5.txt | Total Weight | 274 |
| Best first BNB Programmic File Name | Total Weight | _, . |
| 1396854338 problem_10_500_2_4_5.txt | rotat Weight | 345 |
| Best first BNB Programmic File Name | Total Weight | 3 13 |
| 1396854338 problem_10_500_2_5_5.txt | rotat Weight | 415 |
| Best first BNB Programmic File Name | Total Weight | 5 |
| 1396854338 problem_10_500_3_1_5.txt | rotat Weight | 485 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_3_2_5.txt | rotat Worging | 204 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_3_3_5.txt | J | 274 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_3_4_5.txt | 3 | 345 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 prolem_10_500_3_5_5.txt | _ | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_100_4_1_5.txt | _ | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_4_1_5.txt | | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_4_2_5.txt | | 204 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_4_3_5.txt | | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_4_4_5.txt | | 345 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_500_4_5_5.txt | | 415 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_1_1_5.txt | _ | 485 |
| Best first BNB Programmic File Name | Total Weight | _ |
| 1396854338 problem_10_1000_1_2_5.txt Best first BNB Programmic File Name | | 0 |
| | Total Weight | ^ |
| 1396854338 problem_10_1000_1_3_5.txt | | 0 |

| Best first BNB Programmic File Name | Total Weight | - · - |
|---|---------------|-------|
| 1396854338 problem_10_1000_1_4_5.txt Best first BNB Programmic File Name | Total Weight | 345 |
| 1396854338 problem_10_1000_1_5_5.txt | Total Weight | 415 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_2_1_5.txt | | 0 |
| Best first BNB Programmic File Name 1396854338 problem_10_1000_2_2_5.txt | Total Weight | 0 |
| Best first BNB Programmic File Name | Total Weight | U |
| 1396854338 problem_10_1000_2_3_5.txt | Total Wording | 274 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_2_4_5.txt | | 345 |
| Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_10_1000_2_5_5.txt Best first BNB Programmic File Name | Total Weight | U |
| 1396854338 problem_10_1000_3_1_5.txt | Total Weight | 0 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_3_2_5.txt | | 0 |
| Best first BNB Programmic File Name | Total Weight | 274 |
| 1396854338 problem_10_1000_3_3_5.txt Best first BNB Programmic File Name | Total Weight | 274 |
| 1396854338 problem_10_1000_3_5_5.txt | Total Weight | 415 |
| Best first BNB Programmic File Name | Total Weight | 5 |
| 1396854338 problem_10_1000_3_4_5.txt | _ | 345 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_4_1_5.txt | TatalMainht | 485 |
| Best first BNB Programmic File Name 1396854338 problem_10_1000_4_2_5.txt | Total Weight | 204 |
| Best first BNB Programmic File Name | Total Weight | 204 |
| 1396854338 problem_10_1000_4_3_5.txt | | 274 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_10_1000_4_4_5.txt | | 345 |
| Best first BNB Programmic File Name | Total Weight | 41 E |
| 1396854338 problem_10_1000_4_5_5.txt Best first BNB Programmic File Name | Total Weight | 415 |
| 1396854338 problem_50_50_1_1_5.txt | Total Weight | 17 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_50_1_2_5.txt | | 38 |
| Best first BNB Programmic File Name | Total Weight | 42 |
| 1396854338 problem_50_50_1_3_5.txt Best first BNB Programmic File Name | Total Weight | 12 |
| 1396854338 problem_50_50_1_4_5.txt | Total Weight | 8 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_50_1_5_5.txt | | 5 |
| Best first BNB Programmic File Name | TotalWeight | |
| 1396854338 problem_50_50_2_1_5.txt | | 18 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_50_2_2_5.txt | T-4-134 + 4 + | 28 |
| Best first BNB Programmic File Name | Total Weight | |

| 420/05/4220 analylana 50 50 2 2 5 foot | | 47 |
|--|--------------|----|
| 1396854338 problem_50_50_2_3_5.txt Best first BNB Programmic File Name | Total Weight | 17 |
| 1396854338 problem_50_50_2_4_5.txt Best first BNB Programmic File Name | Total Weight | 48 |
| 1396854338 problem_50_50_2_5_5.txt Best first BNB Programmic File Name | Total Weight | 18 |
| 1396854338 problem_50_50_3_1_5.txt Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_50_50_3_2_5.txt Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_50_50_3_4_5.txt Best first BNB Programmic File Name | Total Weight | 30 |
| 1396854338 problem_50_50_3_3_5.txt Best first BNB Programmic File Name | Total Weight | 26 |
| 1396854338 problem_50_50_4_1_5.txt Best first BNB Programmic File Name | Total Weight | 43 |
| 1396854338 problem_50_50_4_2_2.txt Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_50_50_4_2_5.txt Best first BNB Programmic File Name | Total Weight | 34 |
| 1396854338 problem_50_50_4_3_5.txt Best first BNB Programmic File Name | Total Weight | 10 |
| 1396854338 problem_50_50_4_5_5.txt Best first BNB Programmic File Name | Total Weight | 29 |
| 1396854338 problem_50_100_1_1_5.txt Best first BNB Programmic File Name | Total Weight | 67 |
| 1396854338 problem_50_100_1_2_5.xtx Best first BNB Programmic File Name | Total Weight | 0 |
| 1396854338 problem_50_100_1_2_5.txt Best first BNB Programmic File Name | Total Weight | 63 |
| 1396854338 problem_50_100_1_3_5.txt Best first BNB Programmic File Name | Total Weight | 12 |
| 1396854338 problem_50_100_1_4_5.txt Best first BNB Programmic File Name | Total Weight | 9 |
| 1396854338 problem_50_100_1_5_5.txt Best first BNB Programmic File Name | Total Weight | 56 |
| 1396854338 problem_50_100_2_1_5.txt Best first BNB Programmic File Name | Total Weight | 24 |
| 1396854338 problem_50_100_2_2_5.txt Best first BNB Programmic File Name | Total Weight | 88 |
| 1396854338 problem_50_100_2_3_5.txt Best first BNB Programmic File Name | Total Weight | 21 |
| 1396854338 problem_50_100_2_4_5.txt Best first BNB Programmic File Name | Total Weight | 48 |
| 1396854338 problem_50_100_2_5_5.txt Best first BNB Programmic File Name | Total Weight | 63 |
| 1396854338 problem_50_100_3_1_5.txt Best first BNB Programmic File Name | Total Weight | 53 |
| 1396854338 problem_50_100_3_2_5.txt Best first BNB Programmic File Name | Total Weight | 11 |
| | | |

| 1396854338 problem_50_100_3_3_5.txt | | 70 |
|-------------------------------------|--------------|---|
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_3_4_5.txt | | 81 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_3_5_5.txt | | 65 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_4_1_5.txt | | 43 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_4_2_5.txt | | 9 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_4_4_5.txt | | 70 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_4_3_5.txt | | 60 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_100_4_5_5.txt | _ | 84 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_1_1_5.txt | _ | 167 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_1_2_5.txt | _ | 463 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_1_3_5.txt | J | 324 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_1_4_5.txt | | 408 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_1_5_5.txt | | 465 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_2_1_5.txt | | 143 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_2_2_5.txt | | 336 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_2_3_5.txt | | 466 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_2_4_5.txt | | 468 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_3_1_5.txt | | 483 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_2_5_5.txt | | 399 |
| Best first BNB Programmic File Name | Total Weight | • |
| 1396854338 problem_50_500_3_4_5.txt | | 180 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_3_5_5.txt | | 439 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_4_1_5.txt | | 43 |
| Best first BNB Programmic File Name | Total Weight | - |
| 1396854338 problem_50_500_4_2_5.txt | | 301 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_50_500_4_3_5.txt | | 470 |
| Best first BNB Programmic File Name | Total Weight | - |
| 1396854338 problem_50_500_4_4_5.txt | 3 | 375 |
| Best first BNB Programmic File Name | Total Weight | |
| • | - | |
| | | |

| 1396854338 | 3 problem_50_500_4_5_5.txt | | 493 |
|---------------------------|---|------------------|------|
| Best first BNB Programmic | File Name | Total Weight | |
| 1396854338 | 3 problem_50_1000_1_1_5.txt | | 667 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_1_2_5.txt | | 463 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_1_3_5.txt | | 677 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_1_4_5.txt | | 408 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_1_5_5.txt | | 205 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_100_4_1_5.txt | | 0 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_4_1_5.txt | | 43 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_4_2_5.txt | | 0 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_4_2_5.txt | | 801 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_4_3_5.txt | | 560 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_50_1000_4_4_5.txt | | 670 |
| Best first BNB Programmic | File Name | Total Weight | 40.0 |
| | 3 problem_50_1000_4_5_5.txt | T (1)4/ () 1 (| 429 |
| Best first BNB Programmic | File Name | Total Weight | 47 |
| | 3 problem_100_50_1_1_5.txt | T-4-1 \\/-:- -4 | 17 |
| Best first BNB Programmic | File Name | Total Weight | 20 |
| | 3 problem_100_50_1_2_5.txt | Tatal Maide | 38 |
| Best first BNB Programmic | File Name | Total Weight | 12 |
| | 3 problem_100_50_1_3_5.txt | Total Woight | 12 |
| Best first BNB Programmic | File Name | Total Weight | 9 |
| | 3 problem_100_50_1_4_5.txt | Total Woight | 9 |
| Best first BNB Programmic | File Name | Total Weight | 5 |
| | 3 problem_100_50_1_5_5.txt File Name | Total Weight | J |
| Best first BNB Programmic | Price Name B problem_100_50_2_1_5.txt | Total Weight | 18 |
| Best first BNB Programmic | File Name | Total Weight | 10 |
| _ | B problem_100_50_2_2_5.txt | Total Weight | 49 |
| Best first BNB Programmic | File Name | Total Weight | 77 |
| • | 3 problem_100_50_2_3_5.txt | rotat Weight | 17 |
| Best first BNB Programmic | File Name | Total Weight | ., |
| • | 3 problem_100_50_2_4_5.txt | rotat Weight | 48 |
| Best first BNB Programmic | File Name | Total Weight | |
| <u>-</u> | 3 problem_100_50_2_5_5.txt | | 0 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_100_50_3_1_5.txt | 3 | 0 |
| Best first BNB Programmic | File Name | Total Weight | |
| | 3 problem_100_50_3_2_5.txt | J | 11 |
| Best first BNB Programmic | File Name | Total Weight | |
| - | | | |

| 1396854338 problem_100_50_3_3_5.txt | | 20 |
|--|--|--|
| Best first BNB Programmic File Name 1396854338 problem_100_50_3_4_5.txt | Total Weight | 25 |
| Best first BNB Programmic File Name | Total Weight | 23 |
| 1396854338 problem_100_50_3_5_5.txt | | 39 |
| Best first BNB Programmic File Name 1396854338 problem_100_50_4_1_5.txt | Total Weight | 43 |
| Best first BNB Programmic File Name | Total Weight | 73 |
| 1396854338 problem_100_50_4_2_5.txt | J | 1 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_100_50_4_3_5.txt Best first BNB Programmic File Name | Total Woight | 30 |
| Best first BNB Programmic File Name 1396854338 problem_100_50_4_4_5.txt | Total Weight | 34 |
| Best first BNB Programmic File Name | Total Weight | ٥. |
| 1396854338 problem_100_50_4_5_5.txt | _ | 47 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_100_100_1_1_5.txt | T . 134 : 1 . | 67 |
| Best first BNB Programmic File Name | Total Weight | 58 |
| 1396854338 problem_100_100_1_2_5.txt Best first BNB Programmic File Name | Total Weight | 30 |
| 1396854338 problem_100_100_1_3_5.txt | Total Weight | 83 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_100_100_1_4_5.txt | _ | 9 |
| Best first BNB Programmic File Name | Total Weight | |
| 1396854338 problem_100_100_1_5_5.txt | | 5 |
| • | T . 134/ 1.14 | |
| Best first BNB Programmic File Name | Total Weight | 24 |
| Best first BNB Programmic File Name 1396854338 problem_100_100_2_1_5.txt | | 24 |
| Best first BNB Programmic File Name 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name | Total Weight Total Weight | 24 88 |
| Best first BNB Programmic File Name 1396854338 problem_100_100_2_1_5.txt | | |
| Best first BNB Programmic File Name 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt | Total Weight | |
| Best first BNB Programmic File Name 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name | Total Weight | 88 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_4_5.txt | Total Weight Total Weight Total Weight | 88 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic File Name | Total Weight Total Weight | 88 0 85 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_5_5.txt | Total Weight Total Weight Total Weight Total Weight | 88 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_5_5.txt | Total Weight Total Weight Total Weight | 88 0 85 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_2_5_5.txt | Total Weight Total Weight Total Weight Total Weight | 88 0 85 20 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt | Total Weight Total Weight Total Weight Total Weight Total Weight Total Weight | 88 0 85 20 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt File Name 1396854338 problem_100_100_3_2_5.txt | Total Weight Total Weight Total Weight Total Weight Total Weight | 88 0 85 20 36 0 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_45.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_3_5.txt | Total Weight | 88 0 85 20 36 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_3_3_5.txt Best first BNB Programmic File Name | Total Weight Total Weight Total Weight Total Weight Total Weight Total Weight | 88 0 85 20 36 0 74 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_3_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_3_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_4_5.txt | Total Weight | 88 0 85 20 36 0 |
| Best first BNB Programmic 1396854338 problem_100_100_2_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_44_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_4_5.txt Best first BNB Programmic 1396854338 problem_100_100_2_5_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_1_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_3_2_5.txt Best first BNB Programmic File Name 1396854338 problem_100_100_3_3_5.txt Best first BNB Programmic File Name | Total Weight | 88 0 85 20 36 0 74 |
| Best first BNB Programmic | Total Weight | 88 0 85 20 36 0 74 80 |
| Best first BNB Programmic | Total Weight | 88 0 85 20 36 0 74 80 |
| Best first BNB Programmic | Total Weight | 88 0 85 20 36 0 74 80 39 46 |
| Best first BNB Programmic | Total Weight | 88 0 85 20 36 0 74 80 |

| 139685 | 54338 problem_100_100_4_3_5.txt | | 60 |
|---------------------------|---|--------------|------|
| Best first BNB Programmic | File Name | Total Weight | |
| 139685 | 54338 problem_100_100_4_4_5.txt | | 0 |
| Best first BNB Programmic | File Name | Total Weight | |
| 13968 | 54338 problem_100_100_4_5_5.txt | | 29 |
| Dynamic Programmic | File Name | Total Weight | |
| | 284 problem_10_50_1_1_5.txt | | 292 |
| Dynamic Programmic | File Name | Total Weight | |
| | 5488 problem_10_50_1_2_5.txt | | 476 |
| Dynamic Programmic | File Name | Total Weight | |
| | 302 problem_10_50_1_3_5.txt | | 732 |
| Dynamic Programmic | File Name | Total Weight | |
| | 264 problem_10_50_1_4_5.txt | | 1372 |
| Dynamic Programmic | File Name | Total Weight | |
| | 0 problem_1_50_1_5_5.txt | | 0 |
| Dynamic Programmic | File Name | Total Weight | |
| | 222 problem_10_50_1_5_5.txt | | 1470 |
| Dynamic Programmic | File Name | Total Weight | |
| | 319 problem_10_50_2_1_5.txt | | 292 |
| Dynamic Programmic | File Name | Total Weight | |
| | 211 problem_10_50_2_2_5.txt | | 378 |
| Dynamic Programmic | File Name | Total Weight | |
| | 240 problem_10_50_2_3_5.txt | | 732 |
| Dynamic Programmic | File Name | Total Weight | |
| | 0 problem_10_2_4_5.txt | | 0 |
| Dynamic Programmic | File Name | Total Weight | |
| | 339 problem_10_50_2_4_5.txt | | 1372 |
| Dynamic Programmic | File Name | Total Weight | |
| | 290 problem_10_50_2_5_5.txt | | 1470 |
| Dynamic Programmic | File Name | Total Weight | |
| | 79 problem_10_50_3_1_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 97 problem_10_50_3_2_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 89 problem_10_50_3_3_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 66 problem_10_50_3_4_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 91 problem_10_50_3_5_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 51 problem_10_50_4_1_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 51 problem_10_50_4_2_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | |
| | 50 problem_10_50_4_3_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | F.4 |
| | 50 problem_10_50_4_4_5.txt | | 51 |
| Dynamic Programmic | File Name | Total Weight | F.4 |
| Duna maia Dua mara arai- | 51 problem_10_50_4_5_5.txt File Name | Takal Water | 51 |
| Dynamic Programmic | rile Name | Total Weight | |

| | 434 problem_10_100_1_1_5.txt | | 492 |
|---------------------|------------------------------|-----------------|------|
| Dynamic Programmic | File Name | Total Weight | |
| , , | 540 problem_10_100_1_2_5.txt | J | 878 |
| Dynamic Programmic | File Name | Total Weight | |
| -, | 452 problem_10_100_1_3_5.txt | | 2082 |
| Dynamic Programmic | File Name | Total Weight | |
| -, | 514 problem_10_100_1_4_5.txt | | 2772 |
| Dynamic Programmic | File Name | Total Weight | |
| Dynamic Frogramme | 522 problem_10_100_1_5_5.txt | Total Weight | 2720 |
| Dynamic Programmic | File Name | Total Weight | 2,20 |
| Dynamic i rogramme | 117 problem_10_100_2_1_5.txt | Total Weight | 101 |
| Dynamic Programmic | File Name | Total Weight | 101 |
| Dynamic i rogrammic | 105 problem_10_100_2_2_5.txt | Total Weight | 101 |
| Dynamic Programmic | File Name | Total Weight | 101 |
| Dynamic i rogrammic | 100 problem_10_100_2_3_5.txt | Total Weight | 101 |
| Dynamic Programmic | File Name | Total Weight | 101 |
| Dynamic Programmic | 109 problem_10_100_2_4_5.txt | Total Weight | 101 |
| Dynamic Programmic | File Name | Total Weight | 101 |
| Dynamic Programmic | | Total Weight | 101 |
| Dunamia Duamenania | 107 problem_10_100_2_5_5.txt | Tatal Wainbt | 101 |
| Dynamic Programmic | File Name | Total Weight | 101 |
| D | 141 problem_10_100_3_1_5.txt | T-4-1 \\\-:- -4 | 101 |
| Dynamic Programmic | File Name | Total Weight | 404 |
| | 147 problem_10_100_3_2_5.txt | T . 134 * 1 . | 101 |
| Dynamic Programmic | File Name | Total Weight | 404 |
| | 135 problem_10_100_3_3_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 127 problem_10_100_3_4_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 131 problem_10_100_3_5_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 101 problem_10_100_4_1_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 101 problem_10_100_4_2_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 100 problem_10_100_4_3_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 100 problem_10_100_4_4_5.txt | | 101 |
| Dynamic Programmic | File Name | Total Weight | |
| | 101 problem_10_100_4_5_5.txt | | 101 |

3 GRAPHS









