|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Time | | | | | | | |
|  | p01 | p02 | p03 | p04 | p05 | p06 | p07 |
| dp\_by\_weight | 0.002196216583251953 | 0.00020053386688232422 | 0.0013972043991088868 | 0.0004990339279174804 | 0.0014979124069213867 | 0.001496744155883789 | 0.01777200698852539 |
| dp\_by\_cost | 0.012081146240234375 | 0.0006979465484619141 | 0.0022964000701904295 | 0.001796865463256836 | 0.01551370620727539 | 0.04358222484588623 | 0.07378563880920411 |
| ptas | 0.0004990577697753906 | 9.999275207519531e-05 | 0.0 | 0.0 | 0.00029947757720947263 | 9.992122650146485e-05 | 0.007589030265808106 |
| 2\_approx | 9.982585906982422e-05 | 0.00010046958923339843 | 0.0 | 0.00010015964508056641 | 0.0 | 0.0 | 9.97781753540039e-05 |
| fptas | 0.05182006359100342 | 0.008339881896972656 | 0.009485459327697754 | 0.013079214096069335 | 0.017273259162902833 | 0.01567718982696533 | 0.06840400695800782 |
| branch\_and\_bound | 4.014264869689941 | 0.3691535234451294 | 0.6039477109909057 | 0.9905783653259277 | 1.3362680435180665 | 2.276142930984497 | 74.91902079582215 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Number of comparisons | | | | | | | |
|  | p01 | p02 | p03 | p04 | p05 | p06 | p07 |
| dp\_by\_weight | 1671 | 139 | 1153 | 365 | 849 | 1203 | 11281 |
| dp\_by\_cost | 7182 | 511 | 1719 | 1413 | 10890 | 28748 | 42670 |
| ptas | 627 | 35 | 48 | 63 | 360 | 63 | 9775 |
| 2\_approx | 10 | 5 | 6 | 7 | 8 | 7 | 15 |
| fptas | 26900 | 5319 | 7020 | 9593 | 9809 | 11597 | 44340 |
| branch\_and\_bound | 10 | 5 | 6 | 7 | 8 | 7 | 15 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Items | | | | | | | |
|  | p01 | p02 | p03 | p04 | p05 | p06 | p07 |
| dp\_by\_weight | [1, 1, 1, 1, 0, 1, 0, 0, 0, 0] | [0, 1, 1, 1, 0] | [1, 1, 0, 0, 1, 0] | [1, 0, 0, 1, 0, 0, 0] | [1, 0, 1, 1, 1, 0, 1, 1] | [0, 1, 0, 1, 0, 0, 1] | [1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1] |
| dp\_by\_cost | [1, 1, 1, 1, 0, 1, 0, 0, 0, 0] | [1, 0, 1, 0, 0] | [1, 1, 0, 0, 1, 0] | [1, 0, 0, 1, 0, 0, 0] | [1, 0, 1, 1, 1, 0, 1, 1] | [1, 0, 0, 1, 0, 0, 1] | [1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1] |
| ptas | [1, 1, 1, 1, 0, 1, 0, 0, 0, 0] | [1, 0, 1, 0, 0]) | [1, 1, 0, 0, 1, 0]) | [1, 0, 0, 1, 0, 0, 0] | [1, 0, 1, 1, 1, 0, 1, 1] | [1, 1, 0, 0, 0, 0, 1] | [1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1] |
| 2\_approx | [1, 1, 1, 1, 0, 0, 0, 0, 0, 0] | [1, 0, 1, 0, 0] | [1, 1, 0, 1, 0, 0] | [1, 1, 0, 0, 1, 1, 0] | [0,1,1,1,0, 1, 1, 1] | [0, 1, 0, 1, 0, 0, 1] | [1, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1] |
| fptas | [1, 1, 1, 1, 0, 1, 0, 0, 0, 0] | [1, 0, 1, 0, 0] | [1, 1, 0, 0, 1, 0] | [1, 0, 0, 1, 0, 0, 0] | [1, 0, 1, 1, 1, 0, 1, 1] | [1, 0, 0, 1, 0, 0, 1] | [1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1] |
| branch\_and\_bound | [1, 1, 1, 1, 0, 1, 0, 0, 0, 0] | [0, 1, 1, 1, 0] | [1, 1, 0, 0, 1, 0] | [1, 0, 0, 1, 0, 0, 0] | [1, 0, 1, 1, 1, 0, 1, 1] | [0, 1, 0, 1, 0, 0, 1] | [1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1] |

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| Costs | | | | | | | |
|  | p01 | p02 | p03 | p04 | p05 | p06 | p07 |
| dp\_by\_weight | 309 | 51 | 150 | 107 | 900 | 1735 | 1458 |
| dp\_by\_cost | 309 | 47 | 150 | 107 | 900 | 1652 | 1458 |
| ptas | 309 | 47 | 150 | 107 | 900 | 1584 | 1419 |
| 2\_approx | 266 | 47 | 146 | 102 | 888 | 1735 | 1441 |
| fptas | 309 | 47 | 150 | 107 | 900 | 1652 | 1458 |
| branch\_and\_bound | 309 | 51 | 150 | 107 | 900 | 1735 | 1458 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Weights | | | | | | | |
|  | p01 | p02 | p03 | p04 | p05 | p06 | p07 |
| dp\_by\_weight | 165 | 26 | 190 | 50 | 104 | 169 | 749 |
| dp\_by\_cost | 165 | 23 | 190 | 50 | 104 | 160 | 749 |
| ptas | 165 | 23 | 190 | 50 | 104 | 151 | 735 |
| 2\_approx | 127 | 23 | 179 | 48 | 92 | 169 | 740 |
| fptas | 165 | 23 | 190 | 50 | 104 | 160 | 749 |
| branch\_and\_bound | 165 | 26 | 190 | 50 | 104 | 169 | 749 |