

5 Input for BNB Algorithm(Each output starts in a new page)

input selected: (273, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11) size 51 sum 2048
perfectSplit 1026 pMax 274 pigeonholePrinciple 613
#####bestSolutionFound just got replaced "Target function=1031 Number of Machines=2 . Content:
<273,55,53,51,49,47,45,43,41,39,37,35,33,31,29,27,25,23,21,18,17,14,13>,<60,59,58,57,56,54,52,50,48,46,44,42,40,38,36,34,32,30,28,26,24,22,20,19,17,15,12,11>" #####
#####bestSolutionFound just got replaced "Target function=1030 Number of Machines=2 . Content:
<273,60,59,58,48,46,44,42,40,38,36,34,32,30,28,26,24,22,20,18,16,14,12>,<57,56,55,54,53,52,51,50,49,47,45,43,41,39,37,35,33,31,29,27,25,23,21,19,17,15,13,11>" #####
#####bestSolutionFound just got replaced "Target function=1026 Number of Machines=2 . Content:
<273,60,59,58,57,46,44,42,40,38,36,34,32,30,27,26,23,22,19,18,15,14,11>,<56,55,54,53,52,51,50,49,48,47,45,43,41,39,37,35,33,31,29,28,25,23,21,20,17,16,13,12>" #####
BEST FOUND: "Target function=1026 Number of Machines=2 . Content:
<273,60,59,58,57,46,44,42,40,38,36,34,32,30,27,26,23,22,19,18,15,14,11>,<56,55,54,53,52,51,50,49,48,47,45,43,41,39,37,35,33,31,29,28,25,23,21,20,17,16,13,12>"
nodes seen: 10 . run time: 0.001 seconds

input selected: (177, 175, 173, 171, 169, 167, 165, 163, 161, 159, 157, 155, 153, 151, 149, 147, 145, 143, 141, 139, 137, 135, 133, 131, 129, 127, 125, 123, 121, 119, 117, 115, 113, 111, 109, 107, 105, 103, 101, 99, 97, 95, 93, 91, 89, 87, 85, 83, 81, 79, 77) size 51 sum 6477
perfectSplit 3240.5 pMax 178 pigeonholePrinciple 2654
#####bestSolutionFound just got replaced "Target function=3278 Number of Machines=2 . Content:
<177,171,169,163,161,155,153,147,145,139,137,131,129,123,121,115,113,107,105,99,97,91,89,83,81>,<175,173,167,165,159,157,151,149,143,141,135,133,127,125,119,117,111,109,103,101,95,93,87,85,79,77>" #####
#####bestSolutionFound just got replaced "Target function=3274 Number of Machines=2 . Content:
<177,175,173,171,169,155,151,147,143,139,135,131,127,123,119,115,111,107,103,99,95,91,87,83,79>,<167,165,163,161,159,157,153,149,145,141,137,133,129,125,121,117,113,109,105,101,97,93,89,85,81,77>" #####
#####bestSolutionFound just got replaced "Target function=3262 Number of Machines=2 . Content:
<177,175,173,171,169,167,151,147,143,139,135,131,127,123,119,115,111,107,103,99,95,91,87,83,79>,<165,163,161,159,157,155,153,149,145,141,137,133,129,125,121,117,113,109,105,101,97,93,89,85,81,77>" #####
#####bestSolutionFound just got replaced "Target function=3248 Number of Machines=2 . Content:
<177,175,173,171,169,167,165,147,143,139,135,131,127,123,119,115,111,107,103,99,95,91,87,83,79>,<163,161,159,157,155,153,151,149,145,141,137,133,129,125,121,117,113,109,105,101,97,93,89,85,81,77>" #####
#####bestSolutionFound just got replaced "Target function=3241 Number of Machines=2 . Content:
<177,175,173,171,169,167,165,163,143,139,135,131,127,123,119,115,111,105,103,97,95,89,87,81,79>,<161,159,157,155,153,151,149,147,145,141,137,133,129,125,121,117,113,109,107,101,99,93,91,85,83,77>" #####
BEST FOUND: "Target function=3241 Number of Machines=2 . Content:
<177,175,173,171,169,167,165,163,143,139,135,131,127,123,119,115,111,105,103,97,95,89,87,81,79>,<161,159,157,155,153,151,149,147,145,141,137,133,129,125,121,117,113,109,107,101,99,93,91,85,83,77>"
nodes seen: 16 . run time: 0.001 seconds

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input selected: (3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,  
    2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,  
    2) size 52 sum 125  
perfectSplit 64.5 pMax 4 pigeonholePrinciple 54  
#####bestSolutionFound just got replaced "Target function=65 Number of  
Machines=2 . Content:  
<3,3,3,3,3,3,3,3,3,3,3,2,2,2,2,2,2,2,2,2,2,2,2,2>, <3,3,3,3,3,3,3,3,3,2,2,2,2,2,2,2,2,2,2,2,  
,2,2,2,2,2,2>" #####  
"CUTOFF was made on ROOT. job on hand: <3>. lower bound=65 is bigger or equal  
than best solution so far=65"
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input selected: (8, 6, 6, 6,
6, 6,

6) size 52 sum 364

perfectSplit 184 pMax 9 pigeonholePrinciple 158

#####bestSolutionFound just got replaced "Target function=184 Number of
Machines=2 . Content:

<8,8,8,8,8,8,8,8,8,8,8,8,8,8,6,6,6,6,6,6,6,6,6,6,6,6>,<8,8,8,8,8,8,8,8,8,8,8,8,6,6,6,6,6,6,
,6,6,6,6,6,6>" #####

"CUTOFF was made on ROOT. job on hand: <8>. lower bound=184 is bigger or equal
than best solution so far=184"

input selected: (730, 620, 600, 525, 510, 490, 425, 415, 335, 330, 325, 320, 310, 310, 290, 270, 210, 190, 190, 170, 150, 140, 120, 110, 90, 90, 90, 80, 50, 10) size 30 sum 8495
perfectSplit 859.5 pMax 731 pigeonholePrinciple 150
#####bestSolutionFound just got replaced "Target function=880 Number of Machines=10 . Content:
<730,120,10>,<620,190,50>,<600,190,80>,<525,210,110>,<510,270,90>,<490,290,90>,<425,310,90>,<415,310,140>,<335,330,150>,<325,320,170>" #####
#####bestSolutionFound just got replaced "Target function=875 Number of Machines=10 . Content:
<730,120,10>,<620,210>,<600,170,90>,<525,335>,<510,330>,<490,325,50>,<425,415>,<320,310,190>,<310,290,150,110>,<270,190,140,90,90,80>" #####
#####bestSolutionFound just got replaced "Target function=870 Number of Machines=10 . Content:
<730,80,50>,<620,210,10>,<600,170,90>,<525,335>,<510,330>,<490,325>,<425,415>,<320,310,140,90>,<310,290,150,110>,<270,190,190,120,90>" #####
1000000 nodes so far ; active 19 ; deleted 999981
2000000 nodes so far ; active 27 ; deleted 1999973
3000000 nodes so far ; active 23 ; deleted 2999977
4000000 nodes so far ; active 26 ; deleted 3999974
5000000 nodes so far ; active 27 ; deleted 4999973
6000000 nodes so far ; active 26 ; deleted 5999974
7000000 nodes so far ; active 26 ; deleted 6999974
8000000 nodes so far ; active 26 ; deleted 7999974
9000000 nodes so far ; active 25 ; deleted 8999975
10000000 nodes so far ; active 27 ; deleted 9999973
11000000 nodes so far ; active 26 ; deleted 10999974
12000000 nodes so far ; active 27 ; deleted 11999973
13000000 nodes so far ; active 26 ; deleted 12999974
14000000 nodes so far ; active 27 ; deleted 13999973
15000000 nodes so far ; active 28 ; deleted 14999972
16000000 nodes so far ; active 26 ; deleted 15999974
17000000 nodes so far ; active 27 ; deleted 16999973
18000000 nodes so far ; active 26 ; deleted 17999974
19000000 nodes so far ; active 26 ; deleted 18999974
#####bestSolutionFound just got replaced "Target function=865 Number of Machines=10 . Content:
<730,120>,<620,140,90>,<600,170,80>,<525,330>,<510,335,10>,<490,310,50>,<425,415>,<325,320,210>,<310,290,150,90>,<270,190,190,110,90>" #####
20000000 nodes so far ; active 26 ; deleted 19999974
21000000 nodes so far ; active 26 ; deleted 20999974
22000000 nodes so far ; active 25 ; deleted 21999975

23000000 nodes so far ; active 25 ; deleted 22999975
24000000 nodes so far ; active 26 ; deleted 23999974
25000000 nodes so far ; active 25 ; deleted 24999975
26000000 nodes so far ; active 25 ; deleted 25999975
27000000 nodes so far ; active 23 ; deleted 26999977
28000000 nodes so far ; active 27 ; deleted 27999973
29000000 nodes so far ; active 26 ; deleted 28999974
30000000 nodes so far ; active 27 ; deleted 29999973
31000000 nodes so far ; active 27 ; deleted 30999973
32000000 nodes so far ; active 25 ; deleted 31999975
33000000 nodes so far ; active 27 ; deleted 32999973
34000000 nodes so far ; active 25 ; deleted 33999975
35000000 nodes so far ; active 22 ; deleted 34999978
36000000 nodes so far ; active 24 ; deleted 35999976
37000000 nodes so far ; active 22 ; deleted 36999978
38000000 nodes so far ; active 24 ; deleted 37999976
39000000 nodes so far ; active 25 ; deleted 38999975
40000000 nodes so far ; active 26 ; deleted 39999974
41000000 nodes so far ; active 26 ; deleted 40999974
42000000 nodes so far ; active 25 ; deleted 41999975
43000000 nodes so far ; active 23 ; deleted 42999977
44000000 nodes so far ; active 27 ; deleted 43999973
45000000 nodes so far ; active 25 ; deleted 44999975
46000000 nodes so far ; active 28 ; deleted 45999972
47000000 nodes so far ; active 26 ; deleted 46999974
48000000 nodes so far ; active 26 ; deleted 47999974
49000000 nodes so far ; active 27 ; deleted 48999973
50000000 nodes so far ; active 27 ; deleted 49999973
51000000 nodes so far ; active 26 ; deleted 50999974
52000000 nodes so far ; active 27 ; deleted 51999973
53000000 nodes so far ; active 26 ; deleted 52999974
54000000 nodes so far ; active 27 ; deleted 53999973
55000000 nodes so far ; active 26 ; deleted 54999974
56000000 nodes so far ; active 21 ; deleted 55999979
57000000 nodes so far ; active 27 ; deleted 56999973
58000000 nodes so far ; active 27 ; deleted 57999973
59000000 nodes so far ; active 25 ; deleted 58999975
60000000 nodes so far ; active 25 ; deleted 59999975
61000000 nodes so far ; active 25 ; deleted 60999975
62000000 nodes so far ; active 26 ; deleted 61999974
63000000 nodes so far ; active 24 ; deleted 62999976
64000000 nodes so far ; active 27 ; deleted 63999973
65000000 nodes so far ; active 24 ; deleted 64999976
66000000 nodes so far ; active 25 ; deleted 65999975
67000000 nodes so far ; active 26 ; deleted 66999974
68000000 nodes so far ; active 28 ; deleted 67999972

69000000 nodes so far ; active 25 ; deleted 68999975
70000000 nodes so far ; active 26 ; deleted 69999974
71000000 nodes so far ; active 27 ; deleted 70999973
72000000 nodes so far ; active 27 ; deleted 71999973
73000000 nodes so far ; active 27 ; deleted 72999973
74000000 nodes so far ; active 27 ; deleted 73999973
75000000 nodes so far ; active 24 ; deleted 74999976
76000000 nodes so far ; active 26 ; deleted 75999974
77000000 nodes so far ; active 25 ; deleted 76999975
78000000 nodes so far ; active 21 ; deleted 77999979
79000000 nodes so far ; active 27 ; deleted 78999973
80000000 nodes so far ; active 26 ; deleted 79999974
81000000 nodes so far ; active 26 ; deleted 80999974
82000000 nodes so far ; active 26 ; deleted 81999974
83000000 nodes so far ; active 25 ; deleted 82999975
84000000 nodes so far ; active 27 ; deleted 83999973
85000000 nodes so far ; active 25 ; deleted 84999975
86000000 nodes so far ; active 25 ; deleted 85999975
87000000 nodes so far ; active 25 ; deleted 86999975
88000000 nodes so far ; active 27 ; deleted 87999973
89000000 nodes so far ; active 25 ; deleted 88999975
90000000 nodes so far ; active 26 ; deleted 89999974
91000000 nodes so far ; active 25 ; deleted 90999975
92000000 nodes so far ; active 26 ; deleted 91999974
93000000 nodes so far ; active 27 ; deleted 92999973
94000000 nodes so far ; active 26 ; deleted 93999974
95000000 nodes so far ; active 26 ; deleted 94999974
96000000 nodes so far ; active 26 ; deleted 95999974
97000000 nodes so far ; active 27 ; deleted 96999973
98000000 nodes so far ; active 25 ; deleted 97999975
99000000 nodes so far ; active 22 ; deleted 98999978
100000000 nodes so far ; active 27 ; deleted 99999973
101000000 nodes so far ; active 25 ; deleted 100999975
102000000 nodes so far ; active 26 ; deleted 101999974
103000000 nodes so far ; active 27 ; deleted 102999973
104000000 nodes so far ; active 25 ; deleted 103999975
105000000 nodes so far ; active 28 ; deleted 104999972
106000000 nodes so far ; active 26 ; deleted 105999974
107000000 nodes so far ; active 27 ; deleted 106999973
108000000 nodes so far ; active 27 ; deleted 107999973
109000000 nodes so far ; active 24 ; deleted 108999976
110000000 nodes so far ; active 26 ; deleted 109999974
111000000 nodes so far ; active 27 ; deleted 110999973
112000000 nodes so far ; active 26 ; deleted 111999974
113000000 nodes so far ; active 25 ; deleted 112999975
114000000 nodes so far ; active 28 ; deleted 113999972

#####bestSolutionFound just got replaced "Target function=860 Number of
Machines=10 . Content:
<730,120>,<620,140,90>,<600,170,80>,<525,325>,<510,335>,<490,310,50>,<425,415,1
0>,<330,310,210>,<320,290,150,90>,<270,190,190,1
10,90>" #####
BEST FOUND: "Target function=860 Number of Machines=10 . Content:
<730,120>,<620,140,90>,<600,170,80>,<525,325>,<510,335>,<490,310,50>,<425,415,1
0>,<330,310,210>,<320,290,150,90>,<270,190,190,1
10,90>"
nodes seen: 114175152 . run time: 2166.79 seconds