

Input 32 jobs with value 2(input index 20):

input selected: (2, 2) size 32 sum 64  
#####bestSolutionFound just got replaced "Target function=16 Number of Machines=8 . Content:  
<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>" #####  
"CUTOFF was made on ROOT. job on hand: <2>. lower bound=16 is bigger or equal than best solution so far=16"

Input 36 jobs with value 1(input index 21):

input selected: (1, 1) size 36 sum 36  
#####bestSolutionFound just got replaced "Target function=12 Number of Machines=6 . Content:  
<1,1,1,1,1>,<1,1,1,1,1>,<1,1,1,1,1>,<1,1,1,1,1>,<1,1,1,1,1>,<1,1,1,1,1>" #####  
"CUTOFF was made on ROOT. job on hand: <1>. lower bound=12 is bigger or equal than best solution so far=12"

Input 32 jobs: 24 with value 2 and 16 with value 1(input index 22):

input selected: (2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1) size 40 sum 64  
#####bestSolutionFound just got replaced "Target function=16 Number of Machines=8 . Content:  
<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>,<2,2,2,1,1>" #####  
"CUTOFF was made on ROOT. job on hand: <2>. lower bound=16 is bigger or equal than best solution so far=16"

Input1: 18 jobs {1,2,3} six from each(input index 23)

input selected: (3, 3, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1) size 18 sum 36  
#####bestSolutionFound just got replaced "Target function=12 Number of Machines=6 . Content:  
<3,2,1>,<3,2,1>,<3,2,1>,<3,2,1>,<3,2,1>,<3,2,1>" #####  
"CUTOFF was made on ROOT. job on hand: <3>. lower bound=12 is bigger or equal than best solution so far=12"

Input2: 28 jobs [1,2,3,3] nine times(input index 24)

input selected: (3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1) size 36 sum 81  
#####bestSolutionFound just got replaced "Target function=18 Number of Machines=9 . Content:  
<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>,<3,3,2,1>" #####  
"CUTOFF was made on ROOT. job on hand: <3>. lower bound=18 is bigger or equal than best solution so far=18"

Input3: jobs 30,20,5,5,5,3,3,3,2,2,1,1,1,1,1(input index 25)

input selected: (30, 20, 5, 5, 5, 3, 3, 3, 2, 2, 2, 1, 1, 1, 1) size 16 sum 85

#####bestSolutionFound just got replaced "Target function=33 Number of Machines=3 . Content: <30>,<20,5,5>,<5,3,3,3,2,2,2,1,1,1,1>"  
#####

BEST FOUND: "Target function=33 Number of Machines=3 . Content: <30>,<20,5,5>,<5,3,3,3,2,2,2,1,1,1,1>"

nodes seen: 13 . run time: 0 seconds

cut off histogram:

on depth 1 there were 1 cut offs

on depth 2 there were 2 cut offs

on depth 3 there were 2 cut offs

on depth 4 there were 3 cut offs

\*\*there were 8 cutoffs in total

Input4: jobs 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9(input index 26)

input selected: (9, 9, 8, 8, 7, 7, 6, 6, 5, 5, 4, 4, 3, 3, 2, 2, 1, 1) size 18 sum 90

#####bestSolutionFound just got replaced "Target function=19 Number of Machines=9 . Content:

<9,1>,<9,1>,<8,2>,<8,2>,<7,3>,<7,3>,<6,4>,<6,4>,<5,5>" #####

"CUTOFF was made on ROOT. job on hand: <9>. lower bound=19 is bigger or equal than best solution so far=19"

Input5: 20 jobs all fives(input index 27)

input selected: (5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5) size 20 sum 100

#####bestSolutionFound just got replaced "Target function=20 Number of Machines=10 . Content:

<5,5>,<5,5>,<5,5>,<5,5>,<5,5>,<5,5>,<5,5>,<5,5>,<5,5>,<5,5>" #####

"CUTOFF was made on ROOT. job on hand: <5>. lower bound=20 is bigger or equal than best solution so far=20"

Input5: 28 jobs all threes(input index 28)

input selected: (3, 3) size 28 sum 84

#####bestSolutionFound just got replaced "Target function=19 Number of Machines=7 . Content:

<3,3,3,3>,<3,3,3,3>,<3,3,3,3>,<3,3,3,3>,<3,3,3,3>,<3,3,3,3>,<3,3,3,3>" #####

"CUTOFF was made on ROOT. job on hand: <3>. lower bound=19 is bigger or equal than best solution so far=19"