

## Mini HW #5

Due Time: 2017/10/26 (Thu.) 17:20

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Suppose you have 4 kinds of objects, each kind of them has its own weight  $w_i$ , value  $v_i$ , and quantity  $n_i$ . Now you would like to maximize the total values while the total weights cannot exceed 8.

Information of these objects:

$i$	$w_i$	$v_i$	$n_i$
1	3	6	2
2	4	5	1
3	1	1	3
4	2	4	2

(1) Please fill the DP table below, where  $dp[i][j]$  indicates the maximum values you can get with weight less or equal to  $j$  using objects 1 to  $i$ . (6pt)

(2) Use the DP table to find out one of the solution and briefly explain how. (4pt)

$i \setminus w$	0	1	2	3	4	5	6	7	8
1	0								
2	0								12
3	0								
4	0			6					

Notes on homeworks:

- With TA's discretion, too complicated answers will be counted as wrong
- The tidiness of your homework contributes to your grade.