



Escuela de Ingeniería en Computación
Investigación de Operaciones

Knapsack Problem
Dynamic Programming

Group 40
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1 Knapsack

2 Costs Table

Capacity	Agua	Barrita	Linterna	Encendedor	Kit de Costura
0	0 x=0	0 x=0	0 x=0	0 x=0	0 x=0
1	0 x=0	0 x=0	0 x=0	0 x=0	0 x=0
2	1 x=1	1 x=0	1 x=0	1 x=0	1 x=0
3	1 x=1	1 x=0	1 x=0	3 x=1	3 x=0
4	2 x=2	2 x=0	2 x=0	3 x=1	3 x=0
5	2 x=2	2 x=0	5 x=1	5 x=0	5 x=0
6	3 x=3	3 x=0	5 x=1	6 x=2	6 x=0
7	3 x=3	3 x=0	6 x=1	6 x=0,2	6 x=0
8	4 x=4	4 x=0	6 x=1	8 x=1	8 x=0
9	4 x=4	4 x=0	7 x=1	9 x=3	9 x=0
10	5 x=5	5 x=0	10 x=2	10 x=0	10 x=0
11	5 x=5	5 x=0	10 x=2	11 x=2	11 x=0
12	6 x=6	6 x=0	11 x=2	12 x=4	12 x=0
13	6 x=6	6 x=0	11 x=2	13 x=1	13 x=0
14	7 x=7	7 x=0	12 x=2	14 x=3	14 x=0
15	7 x=7	7 x=0	15 x=3	15 x=0,5	15 x=0
16	8 x=8	8 x=0	15 x=3	16 x=2	16 x=0
17	8 x=8	8 x=0	16 x=3	17 x=4	17 x=0
18	9 x=9	9 x=0	16 x=3	18 x=1,6	18 x=0
19	9 x=9	9 x=0	17 x=3	19 x=3	19 x=0
20	9 x=9	9 x=0	17 x=3	20 x=5	20 x=0

3 Optimal Solutions

x0:0 x1:0 x2:1 x3:5 x4:0