

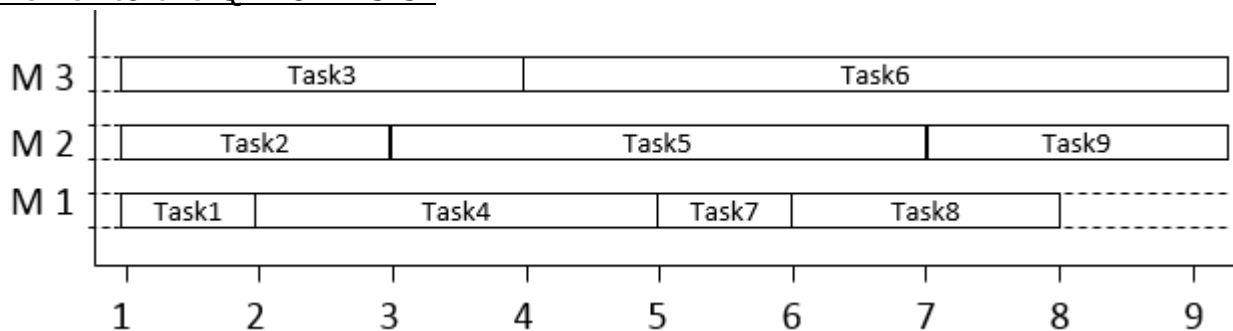
Name: Md. Habibur Rahman Rony  
Student ID: 984582  
Weekday: Week 3- Day 11(a)

Answer to the Q. No. R-5.1:

	a:(12,4)	b:(10,6)	c:(8,5)	d:(11,7)	e:(14,3)	f:(7,1),	g:(9,6)
Weight	4	6	5	7	3	1	6
Benefit	12	10	8	11	14	7	9
<b>V/W</b>	<b>3</b>	<b>1.67</b>	<b>1.6</b>	<b>1.57</b>	<b>4.67</b>	<b>7</b>	<b>1.5</b>

	f	e	a	b	c	d	g
V/W	7	4.67	3	1.67	1.6	1.57	1.5
Weight Left	18-1=17	17-3=14	14-4=10	10-6=4	(4/5)*8=6.4		
<b>Optimal Solution = {f,e,a,b,c} = {(7, 1), (14, 3), (12, 4), (10, 6), (6.40, 4)}</b>							
<b>Total Weight = 49.4</b>							

Answer to the Q. No. R-5.3:



Answer to the Q. No. R-5.11:

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1(a)	0	0	0	0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
2(b)	0	0	0	0	12	12	12	12	12	12	22	22	22	22	22	22	22	22	22
3(c)	0	0	0	0	12	12	12	12	12	20	22	22	22	22	22	30	30	30	30
4(d)	0	0	0	0	12	12	12	12	12	20	22	23	23	23	23	30	31	33	33
5(e)	0	0	0	14	14	14	14	26	26	26	26	26	34	36	37	37	37	37	44
6(f)	0	7	7	14	21	21	21	26	33	33	33	33	34	41	43	44	44	44	44
7(g)	0	7	7	14	21	21	21	26	33	33	33	33	34	41	43	44	44	44	44

Answer to the Q. No. R-5.12:

Here you can't split the widgets into partial part. That's why it is not fractional knapsack problem. So this is should be 0-1 fractional problem.