

CS 303 Algorithm ch 15 homework

15.1-2 The counter example can be

	length	1	2	3	4
	price	1	2	303	400
5pts	density	1	1	101	100

If we "greedy" on density for a rod of length 4. Then the best we get is 304 (303+1) but obviously the best is 400.

15.2-1 combine S w/ m

10pts

	1	2	3	4	5	6	m
1	0	150	330	405	1650	2010	
2	1	0	360	330	2430	1980	
3	2	2	0	180	930	1770	
4	2	2	3	0	3000	1260	
5	4	2	4	4	0	1500	
6	2	2	4	4	5	0	

S

According to S, the best parenthorization is

$$(A_1 A_2) ((A_3 A_4) (A_5 A_6))$$