Name: Loc Nguyen

Last 4 of ID: 2624

CS3310 Homework 4

1. Multiplication order is A x (( B x C ) x D ). Work as shown below
2. (M+1)x(n+1) Table

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 3 | 0 | 3 | 3 | 5 | 5 | 5 | 6 | 9 | 9 | 11 | 11 |
| 4 | 0 | 3 | 3 | 5 | 5 | .6 | 6 | 9 | 9 | 11 | 11 |
| 5 | 0 | 3 | 4 | 7 | 7 | 9 | 9 | 11 | 11 | 13 | 13 |
| 6 | 0 | 3 | 4 | 7 | 7 | 9 | 9 | 11 | 12 | 13 | 14 |

The solution of 0/1 knapsack is M = [1,1,0,0,1,1] which includes the first, second, fifth, and sixth object and excludes the third and fourth object.