Hw 12

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1. In q1.cpp.

2a) In q1.cpp.

b) Brute force will be O^n because we have to look at all subsets.

Whereas ~~the~~ my solution is traversing each node from 2nd second last to top of the triange.

If the triangle has n rows, ~~then~~ it will calculate and traverse max of the left & right choice path for

$$\frac{n(n-1)}{2} \text{ element.}$$

For reconstruction: $O(n)$

$$\therefore T(n) = O(n^2) + O(n)$$
$$= O(n^2).$$

c) Greedy would choose the best local solution, and it may not give the optimal solution.

If we use greedy, then we would end up with $(7, 8, 1, 7, 5) = 28$

But global optimal is $(7, 3, 8, 7, 5) = 30$