0/1 knapsack problem

[intro]

Image that you are a thief in a museum and you see lots of diamond which can NOT be splitted so that you only have 2 choices (1)take it away or (2)NOT take it away. You can NOT take a half of it. And you also can take at most w weights of diamonds. How much money can you earn?

[method]

1. brute-force method
2. dynamic programming:

[E.g.]

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[ref]

[4.5 0/1 Knapsack - Two Methods - Dynamic Programming - YouTube](https://www.youtube.com/watch?v=nLmhmB6NzcM&list=PLDN4rrl48XKpZkf03iYFl-O29szjTrs_O&index=54)