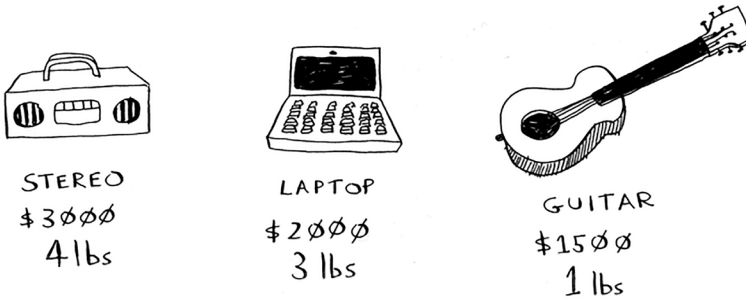


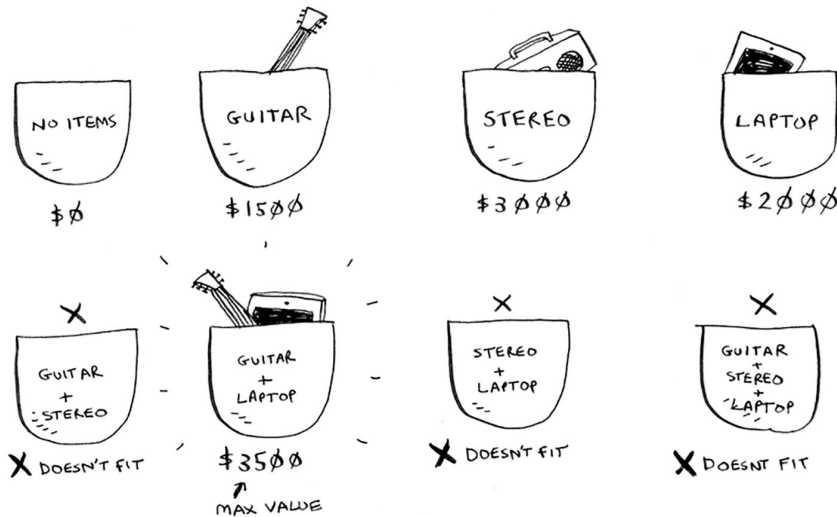
You have three items that you can put into the knapsack.



What items should you steal so that you steal the maximum money's worth of goods?

## The simple solution

The simplest algorithm is this: you try every possible set of goods and find the set that gives you the most value.



This works, but it's really slow. For 3 items, you have to calculate 8 possible sets. For 4 items, you have to calculate 16 sets. With every item you add, the number of sets you have to calculate doubles! This algorithm takes  $O(2^n)$  time, which is very, very slow.