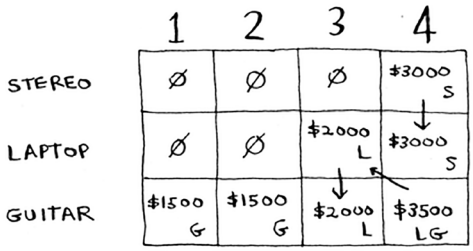
What happens if you change the order of the rows?

Does the answer change? Suppose you fill the rows in this order: stereo, laptop, guitar. What does the grid look like? Fill out the grid for yourself before moving on.

Here's what the grid looks like.



The answer doesn't change. The order of the rows doesn't matter.

Can you fill in the grid column-wise instead of row-wise?

Try it for yourself! For this problem, it doesn't make a difference. It could make a difference for other problems.

What happens if you add a smaller item?

Suppose you can steal a necklace. It weighs 0.5 lb, and it's worth $1,000. So far, your grid assumes that all weights are integers. Now you decide to steal the necklace. You have 3.5 lb left over. What's the max value you can fit in 3.5 lb? You don't know! You only calculated values for 1 lb, 2 lb, 3 lb, and 4 lb knapsacks. You need to know the value of a 3.5 lb knapsack.

Because of the necklace, you have to account for finer granularity, so the grid has to change.