

For each item, there are two possibilities:

1. Check if the current item is larger than the capacity. If it is, ignore the item. In this context, ignoring the item means that for this particular combination of  $\mathbf{w}_i$  and  $\mathbf{v}_i$ , the maximum value is the same as the *previous value*.
2. If the current item can fit in the knapsack, then the maximum value for this combination of  $\mathbf{w}_i$  and  $\mathbf{v}_i$  is the larger of the values resulting from both outcomes.

Store computed sub-problems in the data structure of your choice to avoid re-calculation.