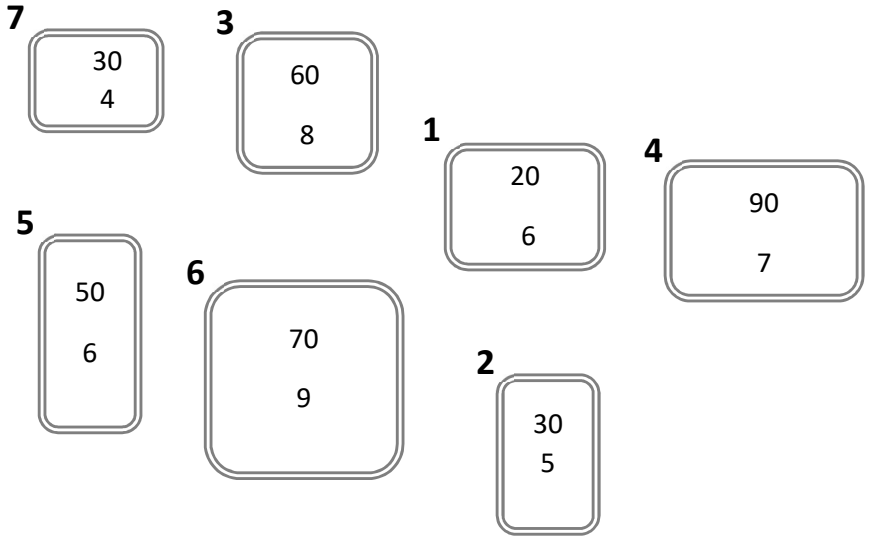
Genetic Algorithms

THE KNAPSACK PROBLEM (100 Points)

You are going on a hiking trip, and there is a limit to the things you can bring. You have two things: a backpack with a size (the weight it can hold that is) and a set of boxes with different weights and different importance values (in the figure: top value is the weight; bottom value is the importance).

The goal is to fill the backpack to make it as valuable as possible without exceeding the maximum weight (120).

1. Define the problem as a genetic algorithm
2. Provide the genome for the problem
3. Define all the fringe operations
4. Cull your population by 50% at every generation



SUBMISSION

Submit your solutions via Canvas.