* Fractional knapsack problem can be solved by greedy algorithm, while discrete knapsack problem can not and should be solved by dynamic programming.
* Discrete knapsack can be divided into two kinds, with repetition and without repatition
* <https://www.coursera.org/learn/algorithmic-toolbox/supplement/CiaMO/polynomial-vs-pseudopolynomial>

This is because we always measure the running time in terms of the input size.

<https://stackoverflow.com/questions/4538581/why-is-the-knapsack-problem-pseudo-polynomial#answer-4538668>

其实就是说假设某一个整数需要二进制位5位来表示，但是我迭代的时候是可以有总共2^5次需要迭代

Assignments

1. Knapsack without repetitioin
2. <https://stackoverflow.com/questions/4803668/3-partition-problem>

<https://www.geeksforgeeks.org/partition-problem-dp-18/>

证明两个三分之一的值是可以实现的

1. 此题定义变量时注意溢出问题

<https://stackoverflow.com/questions/56196926/algorithmic-toolbox-maximize-arithmetic-expression-using-parentheses-failed-t>