Practice 3

We highly encourage being environment friendly and trying all problems on your own.

1. 0-1 knapsack problem.
   1. Instance : weight capacity is 100

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| --- | --- | --- |
| *item* | *weights* | *values* |
| *A* | *50* | *200* |
| *B* | *30* | *180* |
| *C* | *45* | *225* |
| *D* | *25* | *200* |
| *E* | *5* | *50* |

1. Fractional knapsack problem
   1. Instance: same as 1
2. A simple scheduling problem. We are given jobs *j1, j2… jn,* all with known running time *t1, t2… tn*, respectively. We have a single processor. What is the best way to schedule these jobs in order to minimize the average completion time. Assume that it is a no preemptive scheduling: once a job is started, it must run to completion. The following are some instances:
   1. *(j1, j2, j3, j4) : (15，8，3，10)*