

BACK

Knapsack Light



DESCRIPTION

SOLUTIONS 20280

COMMENTS 44



CODEWRITING

SCORE: 300/300

You found two items in a treasure chest! The first item weighs `weight1` and is worth `value1`, and the second item weighs `weight2` and is worth `value2`. What is the total maximum value of the items you can take with you, assuming that your max weight capacity is `maxW` and you can't come back for the items later?

**Note** that there are only two items and you can't bring more than one item of each type, i.e. you can't take two first items or two second items.

### Example

- For `value1 = 10`, `weight1 = 5`, `value2 = 6`, `weight2 = 4` and `maxW = 8`, the output should be

```
knapsackLight(value1, weight1, value2, weight2, maxW) = 10.
```

You can only carry the first item.

- For `value1 = 10`, `weight1 = 5`, `value2 = 6`, `weight2 = 4` and `maxW = 9`, the output should be

```
knapsackLight(value1, weight1, value2, weight2, maxW) = 16.
```

You're strong enough to take both of the items with you.

- For `value1 = 5`, `weight1 = 3`, `value2 = 7`, `weight2 = 4` and `maxW = 6`, the output should be

```
knapsackLight(value1, weight1, value2, weight2, maxW) = 7.
```

You can't take both items, but you can take any of them.

### Input/Output

- [execution time limit] 4 seconds (js)**
- [input] integer value1**

*Guaranteed constraints:*

$2 \leq \text{value1} \leq 20$ .

- [input] integer weight1**

*Guaranteed constraints:*

$2 \leq \text{weight1} \leq 10$ .

