5641. Maximum Units on a Truck

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You are assigned to put some amount of boxes onto **one truck**. You are given a 2D array `boxTypes`, where `boxTypes[i] = [numberOfBoxes_i, numberOfUnitsPerBox_i]`:

- `numberOfBoxes_i` is the number of boxes of type `i`.
- `numberOfUnitsPerBox_i` is the number of units in each box of the type `i`.

You are also given an integer `truckSize`, which is the **maximum** number of **boxes** that can be put on the truck. You can choose any boxes to put on the truck as long as the number of boxes does not exceed `truckSize`.

Return *the **maximum** total number of **units** that can be put on the truck.*

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Easy

Example 1:

```
Input: boxTypes = [[1,3],[2,2],[3,1]], truckSize = 4
Output: 8
Explanation: There are:
- 1 box of the first type that contains 3 units.
- 2 boxes of the second type that contain 2 units each.
- 3 boxes of the third type that contain 1 unit each.
You can take all the boxes of the first and second types, and one box of the third type.
The total number of units will be = (1 * 3) + (2 * 2) + (1 * 1) = 8.
```

Example 2:

```
Input: boxTypes = [[5,10],[2,5],[4,7],[3,9]], truckSize = 10
Output: 91
```

Constraints:

- `1 <= boxTypes.length <= 1000`
- `1 <= numberOfBoxes_i, numberOfUnitsPerBox_i <= 1000`
- `1 <= truckSize <= 10^6`

JavaScript

```javascript
/**
 * @param {number[][]} boxTypes
 * @param {number} truckSize
 * @return {number}
 */
const maximumUnits = (boxTypes, truckSize) => {
    let n = boxTypes.length;
    boxTypes.sort((a, b) => b[1] - a[1]);
    let res = curSize = 0;
    let lastIdx = n - 1;
    for (let i = 0; i < n; i++) {
        if (curSize >= truckSize) {
            lastIdx = i - 1;
            break;
        }
        let num = boxTypes[i][0];
        let units = boxTypes[i][1];
        curSize += num;
        res += units * num;
    }
    if (curSize == truckSize) return res;
    if (curSize > truckSize) {
        let units2 = boxTypes[lastIdx][1];
        res -= units2 * (curSize - truckSize);
    }
    return res;
};
```

Custom Testcase Use Example Testcases

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Submission Result: Accepted (/submissions/detail/437794466/) More Details > (/submissions/detail/437794466/)

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