Save More Water

The ruler of kingdom X has decided to cultivate more paddy fields next year in order to expand the exports. But all his new lands are in the dry zone. So the ruler wants to collect more rainfall. But the bad news is they are 2 weeks before the monsoon. So he decided to quickly convert part of his ruined palace to a water tank. The remaining ruin is almost like a giant water tank. It has two parallel long walls with a 1m gap running from East to West. That two long walls have originally separated into N-1 tanks by N walls situated perpendicular to that two parallel long walls. Unfortunately, those walls are seriously damaged during the last war.

So the remaining walls are all cracked from top to bottom and are of different heights. As the kingdom is about to get the rainfall ruler wants to repair the tanks to remain as much as rainfall. He as already finished repairing that two long parallel walls. Due to the time constraints he can only repair 2 more walls of that N walls.

After repairing a wall of height h it can retain a water column up to the height h. So the ruler needs your help to choose 2 walls from N walls to repair in order to store maximum amount of rainfall. He has given you the heights of N walls in order from East to West. And he already said that two long parallel walls are much higher than any of the N walls. And the gap between any two consecutive walls is 1 m.

Input Format

Line 1: N the number of separation walls Line 2: N space-separated integer denoting height hi of each N wall.

Constraints

2<=N<=100, 000 1<=hi<=10,000

Output Format

One integer the maximum amount of rainfall that can retain within walls.

Sample Input 0

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7
3 6 7 1 3 8 2
```

Sample Output 0

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24
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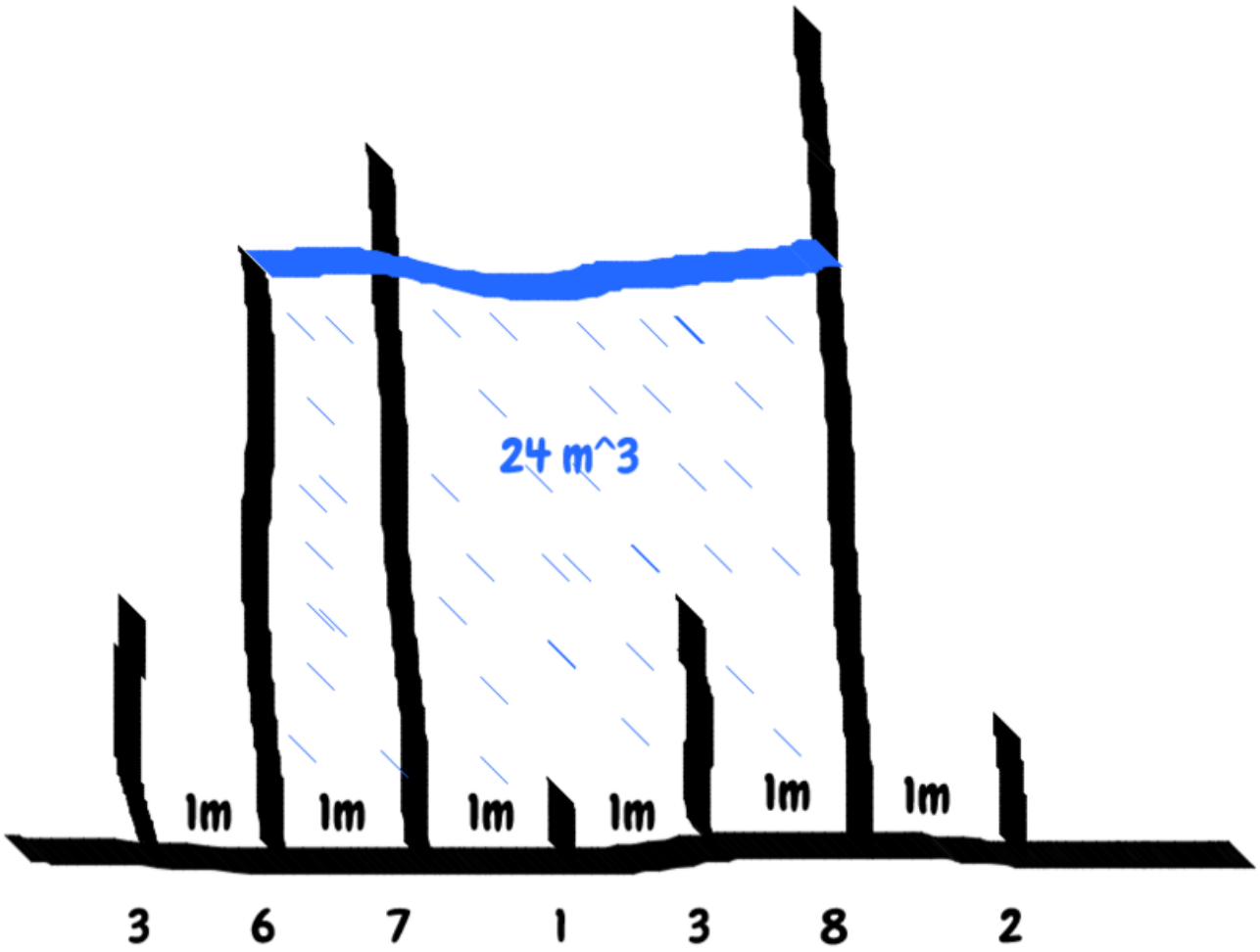
Explanation 0


24 m^3
1m
1m
1m
1m
1m
1m
3
6
7
1
3
8
2