

Submissions

Testrun

0pt Not attempted
0/9 users correct
(0%)

baby_blocks

2pt Not attempted
21/21 users correct
(100%)

17pt Not attempted
11/19 users correct
(58%)

lemming

5pt Not attempted
21/21 users correct
(100%)

14pt Not attempted
17/19 users correct
(89%)

median

10pt Not attempted
11/18 users correct
(61%)

19pt Not attempted
0/3 users correct
(0%)

lispp3

11pt Not attempted
3/9 users correct
(33%)

22pt Not attempted

Top Scores

ecnerwala	59
eatmore	49
krijgertje	48
pashka	48
Swistakk	48
W4yneb0t	48
Merkurev	48
Gennady.Korotkevich	42
tomconerly	38
adsz	38

Problem B. baby_blocks

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the Quick-Start Guide to get started.

small
2 points
2 minute timeout

The contest is finished.

large
17 points
10 minute timeout

The contest is finished.

Problem

Baby Blocks

Your two babies Alicia and Bobby love to play with toy blocks. Their blocks come lined up in a single line in a box; each block has a certain weight. When it is time to play, Alicia takes the leftmost i blocks for some number $i \geq 1$, and Bobby takes the j rightmost blocks for some number $j \geq 1$. i and j are not necessarily the same, and the babies always choose values such that $i + j$ does not exceed the total number of blocks. There may be some blocks left over in the box after the babies have finished taking blocks.

Like many babies, Alicia and Bobby are very concerned about unfairness. After the babies have taken their blocks, but before the babies have started to play with them, Alicia will put all of her blocks on one side of a scale, and Bobby will put all of his blocks on the other side of the scale. If the two total weights are equal, the babies will play happily. Otherwise, they will start to cry and throw the blocks around. You would prefer to avoid this.

How many possible ways are there for the babies to take blocks so that they will be happy? Two ways are different if and only if their (i, j) pairs are different.

Input

The input library is called "baby_blocks"; see the sample inputs below for examples in your language. It defines two methods:

- **GetNumberOfBlocks():**
 - Takes no argument.
 - Returns a 64-bit integer: the number of blocks in the box.
 - Expect each call to take 0.1 microseconds.
- **GetBlockWeight(i):**
 - Takes a 64-bit integer in the range $0 \leq i < \text{GetNumberOfBlocks}()$.
 - Returns a 64-bit integer: the weight of the i -th block in the box, where $i = 0$ corresponds to the leftmost block.
 - Expect each call to take 0.1 microseconds.

Output

Output a single integer: the number of different ways for the babies to take blocks that will make them happy.

Limits

Time limit: 3 seconds.
Memory limit per node: 128 MB.
Maximum number of messages a single node can send: 1000.
Maximum total size of messages a single node can send: 8 MB.
 $1 \leq \text{GetBlockWeight}(i) \leq 10^9$.

Small dataset

Number of nodes: 10.
 $2 \leq \text{GetNumberOfBlocks}() \leq 10^6$.

Large dataset

Number of nodes: 100.
 $2 \leq \text{GetNumberOfBlocks}() \leq 10^9$.

Sample

Input	Output
See input files below.	For sample input 1: 1 For sample input 2:

```
2
For sample input 3:
0
```

Sample input libraries:

Sample input for test 1: [baby_blocks.h](#) [CPP] [baby_blocks.java](#) [Java]

Sample input for test 2: [baby_blocks.h](#) [CPP] [baby_blocks.java](#) [Java]

Sample input for test 3: [baby_blocks.h](#) [CPP] [baby_blocks.java](#) [Java]

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