2011 FIRE

Reports have been circulating in *Alpha Complex* that the current economic crisis has hit them hard. Cries of *'you're fired'* have been echoing through its notoriously confusing corridors.

As part of their induction, an Alpha Complex spy is given a unique non-negative ID and assigned to a single department. The IDs of spies in each department form a contiguous set of integers, and no spies in different departments have adjacent IDs.

Office rumours indicate that, in each department, the spy with the lowest ID and the one with the highest ID have been fired. The IDs of *all* the spies in the complex (before firing) is a well kept secret, but the total of those IDs has become common knowledge. As a morale booster, spies have been told that the total of the IDs of their *fired* colleagues could not have been any lower.

```
012 4
 12 4
0  34
   34
0 2  5
  2  5
 1    6
01    6
0      7
       7
```

For example, suppose that the total of the IDs within Alpha Complex (before firing) was 7. Possible combinations of employee IDs are shown in the diagram; note that different departments are separated by gaps. If Alpha Complex had employed spies with IDs 0, 1 and 6 all three would have been fired and the sum of those IDs would have been 7. If instead they had employed spies with IDs 0, 1, 2 and 4 then 0, 2 and 4 would have been fired for a total of 6. This is the lowest possible total for fired spies.

Write a program that inputs a single integer s ($1 \leq s \leq 1000$) indicating the sum of the IDs of the spies in Alpha Complex and outputs a single integer indicating the minimum possible total of the IDs of the fired spies.

SAMPLE INPUT

7

SAMPLE OUTPUT

6