DWITE '09 R5 #2 - Round to Second Prime

Time limit: 2.0s **Memory limit:** 64M

DWITE Online Computer Programming Contest, March 2010, Problem 2

More from the series of *round to closest obscure function* — round to the closest **second** prime. That is, "round" an integer to a closest prime number such that there is exactly one other prime number between the original input and the result. If the input integer itself is a prime, it is still rounded (the requirement of having a prime in between). If there are two primes equally far away that both satisfy the condition, then the larger one is the answer.

The input will contain 5 lines, integers $5 \leq N \leq 100$.

The output will contain 5 lines, integer answers to corresponding lines of input.

Example: input is 7 (which incidentally is a prime). The two primes around it are 5 and 11. The two **second** primes around that are 3 and 13. 3 is closer to 7 than 13 is, so $r(7) = 3$.

Sample Input

```
5
6
7
8
9
```

Sample Output

```
2
3
3
5
13
```

Problem Resource: DWITE