

## F. ucyhf

time limit per test: 2 seconds  
memory limit per test: 64 megabytes  
input: standard input  
output: standard output

qd ucyhf yi q fhycu dkcruh mxeiu huluhui yi q tyvvuhudj fhycu dkcruh. oekh jqia yi je vydt jxu dxu ucyhf.

### Input

jxu ydfkj sediyiji ev q iydwbu ydjuwuh  $d$  ( $1 \leq d \leq 11184$ ) — jxu edu-rqiut ydtun ev jxu ucyhf je vydt.

### Output

ekjfkj q iydwbu dkcruh.

### Examples

input
1
output
13