
SQUINT

TASK

Write a program to calculate integer square roots.

INPUT

The input is read from a text file named `squint.in`. Its only line consists of an integer $0 \leq n < 2^{63}$.

OUTPUT

The output is written into a text file named `squint.out`. Its only line consists of the smallest nonnegative integer q such that $q^2 \geq n$.

EXAMPLE

If the input file `squint.in` consists of the line

```
122333444455555
```

then the corresponding output file `squint.out` consists of the line

```
11060446
```

because $\sqrt{122333444455555} \approx 11060445.038765619$.