



HOME TOP CONTESTS GYM PROBLEMSET GROUPS RATING API HELP CALENDAR

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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

A. BowWow and the Timetable

time limit per test: 1 second memory limit per test: 256 megabytes input: standard input output: standard output

In the city of Saint Petersburg, a day lasts for 2^{100} minutes. From the main station of Saint Petersburg, a train departs after 1 minute, 4 minutes, 16 minutes, and so on; in other words, the train departs at time 4^k for each integer $k \geq 0$. Team BowWow has arrived at the station at the time s and it is trying to count how many trains have they missed; in other words, the number of trains that have departed **strictly before** time s. For example if s = 20, then they missed trains which have departed at s = 10, s = 10, and s = 10, s

Note that the number s will be given you in a binary representation without leading zeroes.

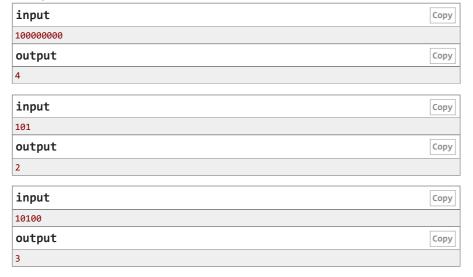
Input

The first line contains a single **binary number** s ($0 \le s < 2^{100}$) without leading zeroes.

Output

Output a single number — the number of trains which have departed strictly before the time s.

Examples



Note

In the first example $100000000_2=256_{10}$, missed trains have departed at $1,\,4,\,16$ and 64.

In the second example $101_2=5_{10}$, trains have departed at 1 and 4.

The third example is explained in the statements.

Codeforces Round #581 (Div. 2)

Finished

Practice



\rightarrow Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++11 5.1.0

Choose file:

选择文件 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't

guarantee that the solution is absolutely correct and it will pass system tests.

Submit

→ Problem tags

math *1100

No tag edit access

→ Contest materials

Announcement (en)

• Tutorial (en)

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