



Gaius Letters

Time limit: 1280 ms
Memory limit: 264 MB

In order to solve this challenge, you will need to break the code used to encrypt it!

M fdahq ime ragzp uz Dayq oazfmuzuzs tgzpdqpe ar xqffqde iduffqz nk Vgxuge Omqemd. Mxx ar ftqy iqdq qzodkbfqp iuft m Omqemd oubtqd iuft ftq wqk egebqofqp fa nq tue nudftpmk uz Vgxx.

Idufq m bdasdmy fa pqodkbf ftq xqffqde.

Azxx ftq mxbtmnqf otmdmofqde rday Mm fa Ll mdq qzodkbfqp. Gbbqdomeq mzp xaiqdomeq otmdmofqde mdq qzodkbfqp ftq emyq imk ituxq bdqeqdhuzs ftqud omeq. Zgynqde, ebmoqe, mzp ebqoumx otmdmofqde mdq mxx wqbf gzotmzsqp.

Efmzpm dp uzbqf

Kagd bdasdmy ygef dqmp ftq fqjf ar ftq xqffqde rday ftq efmzpm dp uzbqf iuft m ymjuygy ar $Z = 10000$ otmdmofqde. Ftq uzbqf iuxx nq m efduzs uz m euzsxq xuzq.

Efmzpm dp agfbqf

Kagd bdasdmy ygef bduzf ftq pqodkbfqp fqjf rad ftq uzbqf efduzs fa ftq efmzpm dp agfbqf.

Oazefdmuzfe mzp zafqe

- $1 \leq Z \leq 10^4$

Input	Output	Explanation
<div>U iuxx nq mf ftq eqzmfq fapmk fa tqmd m bqfufuaz rday Fuxxuge. Om</div>	<div>utus have been acting strange. Should be back in time for dinner.</div>	Ftue ime ftq xmef xqffqd ragzp uz ftq mdotuhq. Ftq agfbqf ue ftq pqodkbfqp hqdeuaz ar ftq qzodkbfqp uzbqf.