

13145 Wuymul Wixcha

Liguh ygjylil Dofcom Wuymul qum ihy iz nby zclmn alyun wbuluwnylm iz bcnmls ni yhwlsjn nby gymmuaym ni bcm gcfenuls wigguhxylm. Uwwilxcha ni bcnmlcuh Auciom Moynihcom: “cz by bux uhsnbcha wihzcxyhncuf ni mus, by qliny cn ch wejbyl, nbun cm, vs mi wbuhacha nby ilxyl iz nby fynnylm iz nby ufjbuwyn, nbun hin u qilx wiofx vy guxy ion”.

Wuymul ufqusm omyx u mbczn iz 3 fynnylm ch nby ufjbuwyn ni nby lcabn. Guhs wyhncolcym bupy jummyx mchwy nby ncgym iz Dofcom Wuymul, mi nby mwcyhwy iz yhwlsjncih bum guxy u nlygyhxiom jlialymm. Zil yrugjfy, u lyguleufy lywyhn cgjlipygyhn wihmcmm ch omcha xczzylyhn mbczn pufoym, chmnyux iz ihfs 3.

Qlcny u jlialug nbun, acpyh uh chnyayl hogvyl, H , uhx u nyrn, yhwlsjnm cn vs omcha Wuymul wixcha. Yhwlsjncih mbiofx vy xihy um ziffiqm. Fynnylm zlig ‘U’ ni ‘T’ bupy ni vy mbcznyx H jimencihm ni nby lcabn, wclwofulfs. Fiqylwumy fynnylm zlig ‘u’ ni ‘t’ ufmi bupy ni vy mbcznyx H jimencihm ni nby lcabn, wclwofulfs. Nby lymn iz wbuluwnylm xi hin bupy ni vy gixczcyx.

Input

Nby chjon wihmcmm iz u mylcym iz nymn wumym. Yuwb nymn wumy ch xymwlcvyx ch nqi fchym. Nby zclmn fchy wihnuchm uh chnyayl hogvyl, chxcwuncha ni ugiohn iz mbczn ni ujjfs. Nby ziffiqcha fchy wihnuchm u nyrn ni yhwlsjn. Ihfs mnuxulx UMWCC wbuluwnylm qcff ujjyl.

Nby chjon qcff yhx qcnb u fchy wihnuchcha ‘0’.

Output

Zil yuwb nymn wumy, nby jlialug bum ni jlixowy ihy fchy. Nbcm fchy wihmcmm iz nby wilymjihxcha yhwlsjnyx nyrn.

Hint: Nby zclmn ivpciom jlivfyg cm ni xywlsjn nbcm gymmuay. Cz sio uly lyuxcha nbcm, molyfs sio bupy uflyuxs xihy cn. Mi nby lymn iz nbcm jlivfyg cm pyls yums. (The first obvious problem is to decrypt this message. If you are reading this, surely you have already done it. So the rest of this problem is very easy.)

Sample Input

```
14
Nbcm cm hin u pyls aiix gynbix...
8
Von cn qum nby lmn ihy ch Bcnmls.
-100
Hiq, ch 2016, nbyly uly vynnyl nywbhckoym, il hin?
0
```

Sample Output

```
Bpqa qa vwb i dmzg owwl umbpwl...
Dwv kv ycu vjg luv qpg kp Jkuvqta.
Lmu, gl 2016, rfcpc ypc zcrrcp caflgoscq, mp lmr?
```