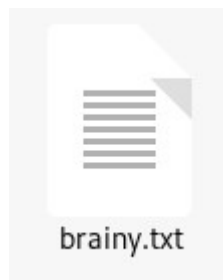


Crypto : Brainy's Cipher

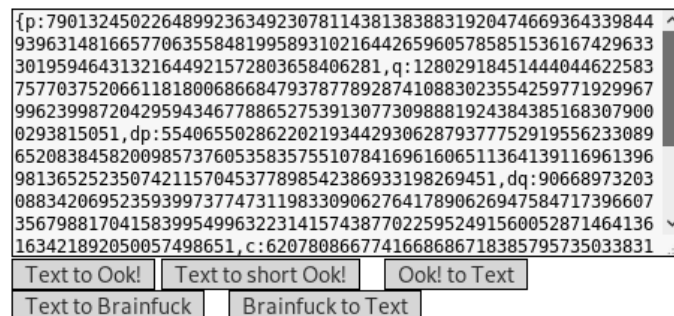
🏆 [30 Points] Brainy's Cipher [by k4m4] [2530 solvers] 642 👍 10 📌 Difficulty: 📊 10/11/2017 ▼

Brainy likes playing around with esoteric programming. He also likes math and has therefore encrypted his very secure password with a popular encryption algorithm. Claiming that his password cannot be retrieved now, he has sent the ciphertext to some of his friends. Can you prove to Brainy that his password can actually be recovered?

Once extracted you got a txt file named brainy.txt



Beacause of the name of challenge i thinking of Brainfuck cipher, so let's decode it online with a brainfuck decoder <https://www.splitbrain.org/static/ook/>



{p:7901324502264899236349230781143813838831920474669364339844939631481665770635584819958931021644265960578585153616742963
330195946431321644921572803658406281,q:1280291845144404462258375770375206611818006866847937877892874108830235542597719299
6799623998720429594346778865275391307730988819243843851683079000293815051,dp:55406550286220219344293062879377752919556233
08965208384582009857376053583575510784169616065113641391169613969813652523507421157045377898542386933198269451,dq:9066897
320308834206952359399737747311983309062764178906269475847173966073567988170415839954996322314157438770225952491560052871
464136163421892050057498651,c:6207808667741668686718385795735033831444628091267339244806502685021268532655118396205649596
457978232530208205439393368226577280275088729360243251296799480554996502091695364463596591660792533563902757918743518060
7475963322465417758959002385451863122106487834784688029167720175128082066670945625067803812970871}

Copy pasting the result on google show us a github with a python script (solve.py) download it <https://github.com/zionspike/ctf-writeup/blob/master/Crypto/%5BpicoCTF%202017%5D%20-%20Weird%20RSA%20-%2090/kapi-note.md>

Open the script we see something like the result of the brainfuck cipher.

```
p =
113874805849098549851253358482403842266539299427577563844893812422061571979865552439953351!
q =
129722228752180865474258189614772579151055157059822837268518335080796004605424792679720502!
dp =
81919577261611188086602822995016674222414765313689424808867824454881508674481065676552987!
dq =
357069575758014809337024260850619146475642595470393023692458306581173054893227059556808837!
c =
952727959864751895055189802511370035092926211401663838878548538637206924202041424484240748!
```

Replace the p / q / dp / dq / c result with the result of decoded brainfuck cipher, then execute the python script.

```
root@kali:~# python solve.py
Qinv: 2207043372019529117656756535626636301829440116014344803187192677342945972140293455835669
25914822207084641554600189204004345080805963023444063892299263948
m1: 49437413074993986257824490238275931180994249527518860068137626874351971280859988288289074
m2: 49437413074993986257824490238275931180994249527518860068137626874351971280859988288289074
h: 0
m: 49437413074993986257824490238275931180994249527518860068137626874351971280859988288289074
solved: ch1n3z_r3m4ind3r_the0rem_r0ck$$$_9792
```

And you got the flag.

Flag : HTB{ch1n3z_r3m4ind3r_the0rem_r0ck\$\$\$_9792}