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[OFFICIAL] Final Challenge (Answer, Spoiler Alert!)

discussion posted 6 days ago by [mako9999](#) (Staff)[Pinned](#)

Please post a decrypted message in this thread when you have succeeded in decrypting the encrypted message from Prof. Ito.

If you don't want to see the decrypted message, please go to [another thread](#) to discuss the way to decrypt it.

This post is visible to everyone.

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3 responses

[tetsushiito](#) (Staff)

6 days ago

Dear all, I hope you are enjoyed the course!

[Spoiler Alert!] Note that this is the place to discuss about the answers of Final Challenge. **If you don't want to see answers, please leave, and try to calculate by yourself!** There is another thread "[\[OFFICIAL\] Final Challenge](#)", where you are welcome to discuss about Final Challenge (without answers).

[rvatalaro](#)

6 days ago

ENJOYPRIMENUMBERS

(Please delete ASAP if I wasn't supposed to post the answer.)

P.S. Yes, thank you, I enjoyed the course very much. I made it a point to learn how RSA worked. I beefed up my understanding of Euclidean Algorithm and computing the multiplicative inverse, and I have a rudimentary knowledge of what's going on with ECC. I would look forward to a third installment of the course! :)

@rvatalaro , can you share the value of 'D' that you obtained by solving $E \cdot D = 1 \pmod{N}$



I have written a C++ code for calculating multiplicative inverses and wish to verify my answer

posted 6 days ago by [Vrund_AS](#)

correction : $E \cdot D = 1 \pmod{(P-1)(Q-1)}$



posted 6 days ago by [Vrund_AS](#)

Here's a table of my results. (If you get "Math processing error," what works for me is just right-clicking and re-choosing the Math renderer.)



[Math Processing Error]

posted 5 days ago by [rvatalaro](#)

Vrund_AS in case you cant get past the "Math Processing Error" from above



$D = 3405936603903535582636872973304033$

posted 5 days ago by [kraDen](#)

Add a comment



[kraDen](#)



5 days ago



Mathematica

In[1]:= LCM[659865899771032, 51410152252116118102]

Out[1]= 16961903186604174717509999235210632

In[2]:= PowerMod[1001, -1, 16961903186604174717509999235210632]

Out[2]= 3405936603903535582636872973304033

In[3]:= PowerMod[8463926725795300052185519614567284,
3405936603903535582636872973304033, 33923806373208400845832116486310399]

Out[3]= 514101525161809130514211302051819

Note the missing leading 0

So decrypted message is

0514101525161809130514211302051819

E N J O Y P R I M E N U M B E R S

Cheers from Oz

and thanks for a great course

Ken

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