

Re: Factoring idea, problems with math community

Source: <http://sci.tech-archive.net/Archive/sci.physics/2006-07/msg00582.html>

- *From:* jstevh@xxxxxxx
 - *Date:* 5 Jul 2006 22:56:00 -0700
-

jstevh@xxxxxxx wrote:

A little while back I posted what I thought was this brilliant factoring idea here because I have this problem where mathematicians lie about my research which is a statement I know won't go over well, but it's true. In any event, that idea was I later found out crap, but here's another as my quest to find a solution in this area is to prove that mathematicians routinely lie—even about VERY important things. And this time, the equations are correct and the simplicity should jump out at you.

Desperate to find some way to break through major lying about my research by the mathematical community, I was doodling, playing around with some simple equations and noticed that with

$$x^2 - a^2 = S + T$$

and

$$x^2 - b^2 = S - k*T$$

I could subtract the second from the first to get

$$b^2 - a^2 = (k+1)*T$$

which is, of course, a factorization of $(k+1)*T$:

$$(b - a)*(b+a) = (k+1)*T$$

with integers for S and T , where T is the target composite to factor, so you have to pick this other integer S , and factor $S+T$.

Really simple.

But how do you find all the variables?

Well, if you pick S , and have a T you want to factor, then using

$$f_1*f_2 = S+T$$

it must be true that

$$a = (f_1 - f_2)/2$$

And

$$x = (f_1 + f_2)/2$$

so, you need the sum of factors of $(S - kT)/4$ to equal the sum of the factors of $(S + T)/4$, so I introduce j , where

$$S - kT = (f_1 + f_2 - j)j$$

and now you solve for k , to get

$$k = (S - (f_1 + f_2 - j)j)/T$$

so you also have

$$S - (f_1 + f_2 - j)j = 0 \pmod{T}$$

so

$$j^2 - (f_1 + f_2)j + S = 0 \pmod{T}$$

and completing the square gives

$$j^2 - (f_1 + f_2)j + (f_1 + f_2)^2/4 = ((f_1 + f_2)^2/4 - S) \pmod{T}$$

so

$$(2j - (f_1 + f_2))^2 = ((f_1 + f_2)^2 - 4S) \pmod{T}$$

so you have the quadratic residue of $((f_1 + f_2)^2 - 4S)$ modulo T , to find j , which is kind of neat, while it's also set what the quadratic residue is, so there's no search involved.

The main residue is a trivial result that gives $k = -1$, but you have an infinity of others found by adding or subtracting T .

It was pointed out to me that these are also trivial, so I figured out a way around that by turning the problem around a bit:

One approach is to find some quadratic residue r , where

$$(f_1 + f_2)^2 - 4S = r + nT$$

where n is a natural number, as then solving for f_1 gives

Re: Factoring idea, problems with math community

$$f_{11} = (\sqrt{4*S + r + n*T} +/\- \sqrt{r + (n-1)*T})/2$$

so you can arbitrarily pick some integer w , square it, and get the quadratic residue modulo T , which is then your r , so now you have

$$w^2 = r + (n-1)*T$$

so you can easily solve for n , and then you pick S so that the second square root is an integer.

So now you have

$$2*j - (f_1 + f_2) = w$$

is a solution.

Neat!!! I like solving problems!!!

Why don't more of you?

Now you can get k .

And then you can find b , from

$$b^2 = x^2 - S + kT$$

and you have the factorization:

$$(b-a)*(b+a) = (k-1)*T.$$

It is possible to generalize further using

$$j = z/y$$

and then the congruence equation becomes

$$(2*z - (f_1 + f_2)y)^2 = ((f_1 + f_2)^2*y^2 - 4*S*y^2) \pmod T.$$

If you're skeptical you may consider the question of finding k when you already have the factorization of T .

And just like that I may have succeeded at showing the problem with modern mathematicians, as, these people lie about so much mathematics you'd be shocked.

Their bold lying has forced me to turn to a practical problem to prove it, so I work on the factoring problem not because I'm really interested in it, but because I'm desperate.

Re: Factoring idea, problems with math community

And here they seem to have missed a trivial solution in the area of factoring.

But how? I don't know. It's a mystery to me. But just look over the equations. Simple stuff.

Did any of you think of that next piece to the puzzle?

If not, why not?

Think about what's at stake here.

Isn't it a big enough deal to do your very best?

James Harris

.