Re: JSH: Objectivity, linking hyperbolas

Source: http://sci.tech−archive.net/Archive/sci.math/2005−04/msg03090.html

- *From*: "Proginoskes" <proginoskes@xxxxxxxxxxxx>
- *Date*: 20 Apr 2005 17:38:45 −0700

jst...@xxxxxxx wrote:
> [...]
> The issue is, how does the SFT map?
>
> There are posters who are trying to argue a trivial
> mapping, not unlike what I mentioned with
>
> x_1 y_1 = 1
>
> and
>
> x_2 y_2 = 7
>
> where if you just map by, say, multiplying x_1 and
> y_1 by sqrt(7) then you can predict at what rate
> you will get particular factors.
>
> Since 7 is prime, let me pick a composite, like
>
> x_2 y_2 = 15
>
> and, imagine you map by multiplying x_1 by 3 and y_1
> by 5, which means you have the factorization up front.
>
> Get the idea?

Yes! You CAN use the SF Theorem to find non−trivial factors of M. (Just map (x,y) to (3x, 5y), then ask what (1,1) maps to. Answer: Two non−trivial factors of M!)

Too bad you need to factor M beforehand.

And I SHOULD get the idea ... I'm the one who suggested setting up a function where you get a non−trivial factor by choosing a special value for x.

And now you've finally come around to the idea that maybe Mathematics CAN make a distinction between trivial and non−trivial factors of M.

I'm waiting for my apology. (Hint, hint.)

> With a simple linkage you can easily tell how factors
> will emerge without debates about frequency of trivial
> versus non−trivial factors in rationals.

Again, if you look at the thread "Talking Rationally About Surrogate Factoring", you'll find this mentioned here.

> But with the SFT, it's a mystery, with people already
> taking sides.

That's because you don't know when the SF Transformation will produce a non−trivial factor of M. I don't know, either, unless I solve certain equations for j, f_1, and k_1.

> I say, it's a mystery, but it looks to me like the
> answer is that the math isn't picky, and will factor
> 50% of the time, but I'm not certain.

You can factor 15 with only ONE iteration, with a 100% success rate, if your transformation happens to be (x,y) −> (3x,5y). All you have to do is to see what happens to (1,1).

You evidently don't understand the consequences of your statement about mapping the hyperbola xy = 1 to the hyperbola xy = 15.

> Others say, it's trivial and it factors trivially,
> and it's all just trivial so shut up about trivial
> stuff.

Yes, THAT transformation. Another one ((x,y) −> (3x,5y)) will NOT factor trivially. The IDEA behind SF may work, e