Re: SF: Back to theory

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Wouldn't the Strong Law of Small Numbers apply here? Try factoring
47143269.

Nora Baron wrote:
> *You have made this so much more complicated than it needs to*
> *be. Here is a simpler approach that may accomplish much the*
> *same and it is also much more general.*
>
> *Assume M is the number to be factored. Pick a (small)*
> *integer j. Let T = M − j. Thus T is a function of both*
> *M and j.*
>
> *Factor T. Assume you have split it into two factors,*
> *f and g. Thus T = f*g.*
>
> *Now let X be some rational function of f and g. One*
> *possible choice might be,*
>
> *X = (f − g)/(f + g).*
>
> *Finally, let Y = M / X. Thus M = X * Y.*
>
> *Note that X and Y are both functions of the factors of*
> *T. Also both are rational numbers. There is some chance*
> *that the numerator of X has a factor in common with M.*
>
> *This is, certainly, surrogate factoring. Really, your*
> *underlying idea is not that different. What you are doing*
> *essentially is finding a more complex function to define*
> *X as a function of f and g.*
>
> *Here is how this might work with M = 15. Let j = 1.*
> *Then T = M − j = 14. You factor T as f * g = 7 * 2. Then*
> *you note that*
>
> *X = (7 − 2) / (7 + 2) = 5/9.*
>
> *Right there, in the numerator, you have a factor that*

> *divides M.*
>
> *Interestingly, the denominator, 9, also has a factor in*
> *common with M.*
>
> *Let's try it on a bigger number. Say M = 77. Thi*