Re: Calculus XOR Probability

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- *From*: Tony Orlow <aeo6@xxxxxxxxxxx>

- *Date*: Tue, 18 Apr 2006 12:52:53 −0400

Matt Gutting said:

> Tony Orlow wrote:
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> > Matt Gutting said:
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> > > Tony Orlow wrote:
>
> <snip>
>
> > > > Basically, all I'm saying boils down to inductive proof of equality holding for infinite n. If some relationship between measures of a set holds for all finite cases greater than some n, then it can be considered to hold for infinite n,
>
> (Matt)
>
> > > How do you know that there are any infinite n in the first place?
>
> (Tony again)
>
> > Because there are sets with infinite numbers of elements, such as any set of all reals in a finite interval. You cannot have half a real number in your set, so this infinite number is integral, and therefore part of what I consider the integers, or hyperintegers. Otherwise, infinite sets cannot have a size, which makes the "infinite" part kind of meaningless.
>
> But how do you know it's an integer in the first place? In other words, what makes you so sure that there is an integer describing the size of this set? Must sizes always be describable by a number? If so, why?

Matt

Because the size of the set is the count of the elements included in it, as far as I'm concerned. That's why I don't accept a system where you add an infinite number of elements and the "size" doesn't change. You don't normally have fractional elements in a set, so this "count" has got to be integral, whether it's finite or infinite. Of course, if you are using something like fuzzy set theory, you may very well have set sizes which are not integral, but I don't think that's what we're discussing, is it?

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Smiles,

Tony

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