Re: Distributive property of functions

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On 31−03−2008 15:19, Olumide wrote:

> I hope this isn't too trivial to ask but, I'm working through a proof
> that appears to rely on the distributive property of polynomials, i.e.
>
> (f + g)(x) = f(x) + g(x)

This has *nothing* to do with the distributive property. Besides,
it is trivially true (for any functions), since this is how the sum
of two functions is defined.

> without saying saying so. I've googled a bit, and I've found that
> trigononometric functions e.g. sin(x) do not have this property,

What do you mean?

> although polynomials appear to (I've done a simple numerical example
> in which g = x**3 and f = x**2). I guess my question then is: what
> sort of functions f(x) and g(x) have this property?

All of them, like I said. To be more precise, it is true (by definition)
for any two functions _f_ and _g_ from S into (A,+), where S is any set
and (A,+) is any abelian semigroup.

Best regards,

Jose Carlos Santos
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