Subject: Re: Math Question
Posted by James Kuyper on Mon, 30 Oct 2006 18:15:47 GMT
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I shouldn't attempt to remember advanced mathematics in public when I'm less than fully awake. :-(It's been a long time since I actually used any of this stuff.

kuyper@wizard.net wrote:
...
> Considered solely as a function whose domain and range are restricted
> to real numbers, x^(a/b), should have two solutions if b is even, and 1
> solution if b is odd, regardless of whether x is positive.

That should be "two solutions if b is even and x is positive, and 1 solution if b is odd, regardless of whether x is positive".

After realizing that mistake, I decided to double check my statement about the case where the range includes complex values:

...
> If a and b are mutually prime integers, then mathematically, x^(a/b)
> has b different values, at most two of which are real, the others are
> complex. If b is odd, only one of the values is real. This is true,

That count of real values is based upon the assumption that the imaginary part of x is 0, and that x is positive. There's no simple statement that covers the general case.