

Re: GCD(0,0)

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-12/msg05257.html>

- *From:* rob@xxxxxxxxxxxxxxxx (Rob Johnson)
 - *Date:* Fri, 30 Dec 2005 14:16:26 GMT
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In article <ub8ar15vpkruhjlh52689tadvlcg5nl5g@xxxxxxx>, David C. Ullrich <ullrich@xxxxxxxxxxxxxxxx> wrote:
>On Thu, 29 Dec 2005 20:58:08 -0500, quasi <quasi@xxxxxxx> wrote:
>
>>On 29 Dec 2005 19:59:26 -0500, hrubin@xxxxxxxxxxxxxxxxxxxxxx (Herman
>>Rubin) wrote:
>>
>>>In article <1135888209.029280.145500@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, >>>Leroy Quet <qqquet@xxxxxxxxxxxxxxxx> wrote:
>>>>I notice that these math-controversy threads often get massive >>>>numbers of replies.
>>>>(While more serious math posts and my games, for example, >>>>hardly ever get any replies.)
>>>>So I will post this troll-bait flame-bait message to sci.math >>>>because I always wanted to start one of those huge threads.
>>>>:)
>>>
>>>>For n = any positive integer, it is known that
>>>
>>>>GCD(n,n) = n
>>>
>>>>and
>>>
>>>>GCD(0,n) = n.
>>>
>>>>(GCD is Greatest Common Divisor, of course.)
>>>
>>>>But what is, if there is any defined value,
>>>
>>>>GCD(0,0)?
>>>
>>>>It certainly isn't 0 (which would fit the pattern above if >>>>n=0), is it?
>>>>I would think that infinity would work as well as anything.
>>>
>>>>Or is GCD(0,0) simply undefined, like 0/0?
>>>
>>>
>>>>thanks, (half seriously, oh well, 3/4 seriously)

Re: GCD(0,0)

>>>>Leroy Quet

>>>

>>>When it comes to common divisors, since everything

>>>divides 0, and otherwise an integer never divides

>>>a smaller integer, for this purpose, 0 is the

>>>greatest common divisor of 0 and 0.

>>

>>You're justifying an exception to the name GCD by pointing out that 0

>>has other special properties. Sure, we could define $\text{gcd}(0,0)=0$ or we

>>could leave it undefined. You can make the case for either one. From

>>my point of view the G in GCD says it all. No need to confuse things

>>unless there's a strong reason.

>

>A strong reason to want a definition of $\text{GCD}(0,0)$ is so we

>don't have to worry about whether x and y are both 0 when

>we mention $\text{GCD}(0,0)$. Since that standard def

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