Re: Is zero even or odd?

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From: John Fields (*jfields_at_austininstruments.com*)
Date: 12/27/04

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On Mon, 27 Dec 2004 20:58:44 +0100, Michael Mendelsohn
<invalid@msgid.michael.mendelsohn.de> wrote:

>Below, you remove the short from my diagram.
>However, you also remove the power supply, which achieves the same
>thing.

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−−−
I don't know what you mean, since the + and − terminals are there and
I refer to the voltage across the resistance as being 1V.
>
>> The proper circuit:
>>
>>       +−−−(V)−−−+
>>       |         |
>> (−)−−−o−−−[R]−−−o−−−(A)−−−o−−−(+)
>>
>> Will yield the proper results if examined using Ohm's law.
>>
>> Assuming that the voltage across the resistance is 1V and the current
>> through it is 1A, then the resistance will be:
>>
>>              E     1V
>>         R = −−− = −−−− = 1 ohm                        (1)
>>              I     1A
>>
>
>Assuming that the voltage across the resistance is 2V and the current
>through it is 1A, then the resistance will be: 2 ohm.
−−−
Why would I want to do that?  I'm specifically setting up a set of
conditions to illustrate _my_ point, not yours.
−−−
>> If we now reduce the voltage to 0.5V and rearrange to solve for I,
>> we'll now have:
>>
>>              E     0.5V
>>         I = −−− = −−−−−− = 0.5A                       (2)
>>              R      1R
>
>We'll then have I = 1V/2R = 0.5 A
>
>> plugging that current into (1) gives us
>>
>>              0.5V
```

>> R = ------ = 1 ohm
>> 0.5A
>
>
>R = 1V / 0.5 A = 2 ohm
>
>
>> If we continue to reduce the voltage, the current and voltage will
>> always be numerically equal, R will remain at 1 ohm and, clearly, will
>> remain at 1 ohm even if we disconnect the voltage supply, forcing both
>> the voltmeter and ammeter to read 0, in which case we'll have:
>>
>> 0V
>> R = ---- = 1 ohm
>> 0A
>
>
>If we continue to reduce the voltage, the current will always be
>numerically half of the voltage, R will remain at 2 ohm and, clearly,
>will remain at 2 ohm even if we disconnect the voltage supply, forcing
>both the voltmeter and ammeter to read 0, in which case we'll have:
> R = 0V / 0A = 2 ohm
>
>
>> Now, if we go to the more general case of:
>>
>> x
>> y = ---
>> x
>>
>> we can see that for any value of x, as x goes to zero, y will remain
>> constant, and exactly equal to 1. Therefore,
>>
>>
>> 0
>>