

Re: Is this proof of infinitely many primes flawed?

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- *From:* W^3 <aderamey.addw@xxxxxxxxxxxx>
 - *Date:* Wed, 28 Jan 2009 11:54:14 -0800
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In article

<c0c7ca4c-ac2f-46d1-8140-6eb591a22fdf@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, "sttscitrans@xxxxxxxx" <sttscitrans@xxxxxxxx> wrote:

On 28 Jan, 03:15, W^3 <aderamey.a...@xxxxxxxxxxxx> wrote:

In article

<192daabf-10e1-483f-bab3-df686a539...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,

conrad <con...@xxxxxxxxxxxx> wrote:

Suppose p_1, p_2, \dots, p_n are all the primes

Let $M = (p_1, p_2, \dots, p_n) + 1$

Suppose $p_k \mid M$

Clearly $p_k \mid (p_1, p_2, \dots, p_n)$

then $p_k \mid M - (p_1, p_2, \dots, p_n) = 1$

But $p_k > 1$ (Contradiction)

Re: Is this proof of infinitely many primes flawed?

Where I do not follow this proof is
if we suppose p_k divides evenly M
then how can we say p_k divides
evenly (p_1, p_2, \dots, p_n) ?

It has nothing to do with assuming $p_k \mid M$. It is simply obvious, as
obvious as saying $5 \mid 3*5*7$.

You are missing the point.

If 2,3,5 were the only primes

$$A = 2*3*5$$

$$B = 2*3*5+1$$

As $B > 1$ some prime 2,3 or 5 must divide it

say, 3,

3 must divide A by definition

3 divides B

3 must divide $B - A = 1$, but 3 does not divide 1

a contradiction.

No, you are confused. I addressed specifically the question

Where I do not follow this proof is
if we suppose p_k divides evenly M
then how can we say p_k divides
evenly (p_1, p_2, \dots, p_n) ?

and nothing else.