

Re: Is this proof of infinitely many primes flawed?

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- *From:* Bill Dubuque <wgd@xxxxxxxxxxxxxxxxxxxxxxxx>
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quasi <quasi@xxxxxxx> wrote:

David C. Ullrich <dullrich@xxxxxxxxxxx> wrote:

I didn't make any claims about what it was or was not "likely" that the OP was asking, just about what he did in fact ask:

"how can we say p_k divides evenly (p_1, p_2, \dots, p_n) ?"

There is after all a context.

Yes. The context *_seems_* to be that he was confused, thinking that the answer to his (trivial) question had something to do with that other assumption, which it doesn't.

Actually, I think the confusion might in fact stem from the use of commas instead of a standard product symbol.

Of course, it makes no sense at all to think that p_k would divide evenly into a *_list_* of distinct primes, so *_we_* (on sci,math) just assumed (knowing how the correct proof goes) that the comma was intended as a product symbol. But the OP (who may simply have copied it incorrectly off the board in class), may have interpreted the expression (p_1, p_2, \dots, p_n) as a list, hence the puzzlement.

That notation might in fact denote the LCM of the p_i if the teacher attempted to present the proof in a form somewhat faithful to Euclid's original proof.

—Bill Dubuque

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