Re: FLTMA: A little group theory

Source: http://sci.tech−archive.net/Archive/sci.math/2006−10/msg06632.html

- *From*: "Chip Eastham" <hardmath@xxxxxxxxx>
- *Date*: 24 Oct 2006 08:15:22 −0700

The Dougster wrote:

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> > > Chip Eastham wrote:
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> > > > The Dougster wrote:
> > > >
> > > > > Ah. The order of −1 is 2. | < −1 > | = 2. < −1 > = { −1, 1 }.
> > > > >
> > > > > How do we know that if w^n == −1 mod z that | < −1 > | divides | < w > | ?
> > > >
> > > > Since <−1> is a subgroup of <w>, order of −1 (two) divides the order of w.
> > >
> > > Yipee! We're starting to use group theory to explore FLT!
> >
> > http://www.mathpages.com/home/kmath264.htm
>
> I think I see this more clearly today. If some power of w == −1 mod z then, knowing w^0 = 1, we have { 1, −1 } <= <w> and so |<−1>| divides |<w>|, where <= means "is a subgroup of".
>
> I see in many sources on the web that without loss of generality, certain conclusions may be made from a^n + b^n = c^n in Z. I have concluded, with help here in sci.math, that exactly one of {x,y,z} is

even, and $x < y < z < x+y$. It might be more useful to give up $x < y < z < x+y$ and find instead that, say, y is even, as some