

# Re: FLTMA: A little group theory

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*Source:* <http://sci.tech-archive.net/Archive/sci.math/2006-10/msg06244.html>

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- *From:* "The Dougster" <[DGoncz@xxxxxxx](mailto:DGoncz@xxxxxxx)>
  - *Date:* 23 Oct 2006 03:20:05 -0700
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The Dougster wrote:

Chip Eastham wrote:

The Dougster wrote:

Ah. The order of  $-1$  is 2.  $|\langle -1 \rangle| = 2$ .  $\langle -1 \rangle = \{ -1, 1 \}$ .

How do we know that if  $w^n \equiv -1 \pmod{z}$  that  
 $|\langle -1 \rangle|$  divides  $|\langle w \rangle|$ ?

Since  $\langle -1 \rangle$  is a subgroup of  $\langle w \rangle$ , 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>

Doug

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