

# Re: how to deal with the algebra problem?

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*Source:* <http://sci.tech-archive.net/Archive/sci.math/2005-04/msg02396.html>

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SU(2) <[idylic.bbs@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:idylic.bbs@xxxxxxxxxxxxxxxxxxxxxxxx)> wrote:

>  
 > assume  $a_1 * a_2 * \dots * a_n = 1$   
 > does there exist  $b_1, b_2, \dots, b_n$  such that:  
 >  $a_1(b_1/b_2) = 1$   
 >  $a_2(b_2/b_3) = 1$   
 > .  
 > .  
 > .  
 >  $a_n(b_n/b_1) = 1$   
 >  
 > if exist, how to find these  $b_i$  ( $i=1 \sim n$ ) ?

The b's are simply  $b_1 * (\text{product of prior a's})$ , i.e.

$b = b a = b a$   
 2 1 1 1 1

$b = b a = b a a$   
 3 2 2 1 1 2

$b = b a = b a a a$   
 4 3 3 1 1 2 3

.  
 .  
 $b = b a = b a a a \dots a$   
 $i+1 i i 1 1 2 3 i$

.  
 .  
 $b = b a = b a a a \dots a \dots a = b$   
 $n+1 n n 1 1 2 3 i n 1$

—Bill Dubuque

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- *References:*
    - ◆ [how to deal with the algebra problem?](#)

Re: how to deal with the algebra problem?

◇ *From: SU(2)*

- Prev by Date: [\*\*Re: Congruence quesiton\*\*](#)
- Next by Date: [\*\*Re: JSH: Tag along society\*\*](#)
- Previous by thread: [\*\*Re: how to deal with the algebra problem?\*\*](#)
- Next by thread: [\*\*Re: how to deal with the algebra problem?\*\*](#)
- Index(es):
  - ◆ [\*\*Date\*\*](#)
  - ◆ [\*\*Thread\*\*](#)