# Re: Some math, algebraic integers

***Source:*** http://sci.tech−archive.net/Archive/sci.math/2004−09/4301.html

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***From:*** W. Dale Hall (*mailtowd−hall_at_pacbell.net*)
***Date:*** 09/19/04

Date: Sun, 19 Sep 2004 00:31:34 GMT

James Harris wrote:
*> "W. Dale Hall" <mailtowd−hall@pacbell.net> wrote in message*
*news:<1zU2d.17114$QJ3.13457@newssvr21.news.prodigy.com>...*
*>*
*>>James Harris wrote:*
*>>*
*>>>Luckily for me the math that explains my work is actually quite*
*>>>simple in many ways. All that is required is that you accept*
*>>>algebra. That might sound weird, but pay attention and you'll*
*>>>understand by the end.*
*>>>*
*>>>Now with rationals you can have a simple case like*
*>>>*
*>>>2x^2 + 5x − 3 = 0*
*>>>*
*>>>where the roots are x=1/2 and x=−3, if I did my algebra correctly.*
*>>>*
*>>>Now notice you have an integer paired with a fraction, which, of*
*>>>course, is NOT an integer.*
*>>>*
*>>*
*>>So what? The polynomial is not irreducible, is it?*
*>>*
*>> 2x^2 + 5x − 3 = (2x − 1)(x + 3)*
*>>*
*>>Given any finite set of numbers, it is a triviality to produce*
*>>a polynomial with those numbers as roots.*
*>>*
*>*
*>*
*> Like, yeah, the polynomial has rational roots, which is what I already*
*> said and I gave those roots, as they are 1/2 and −3.*
*>*
*> What mathematicians falsely assumed is that the picture changes if*
*> both roots are irrational AND the polynomial they are roots of has*
*> integer coefficients, as they made a false leap, which I explain*
*> below.*
*>*

>
*>>>Now consider some numbers q_1 and q_2, which I won't say a lot about g*