Re: Can I have fries and a calculator with that?

Source: http://sci.tech−archive.net/Archive/sci.math/2005−12/msg02238.html

- *From*: Virgil <ITSnetNOTcom#virgil@xxxxxxxxxxx>
- *Date*: Fri, 09 Dec 2005 21:13:35 −0700

In article <1134186257.632537.287640@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
"Kobu" <kobu.selva@xxxxxxxxx> wrote:

> Dave L. Renfro wrote:
> > Dave L. Renfro wrote:
> >
> > >> I came across the following while searching for
> > >> something else. It speaks for itself.
> > >>
> > >> −−−−−−−−−−−−−−−−−−−−−−−−−−−
> > >>
> > >> http://www.vbforums.com/showthread.php?referrerid=43870&t=298609
> > >>
> > >> How do i rationalize the denominator in this?
> > >> 6/sqr(x) + sqr(3) I know for somthing like
> > >> 7/sqr(4) i can use a rationalizing factor of
> > >> sqr(4) to end up getting 7sqr(4)/4 but then
> > >> im not sure if this ends up being reduced to
> > >> 7sqr(1). So i guess im asking two quesitons.
> > >> Thanks.
> > >>
> > >> −−−−−−−−−−−−−−−−−−−−−−−−−−−
> > >>
> > >> I'm almost tempted to think this was a troll post
> > >> given the "two quesitons" at the end, but I think
> > >> doing so requires too much textual interpretation
> > >> to be realistic.
> >
> > Virgil wrote:
> >
> > > If that denominator is (sqrt(x) + sqrt(3)), you can
> > > rationalize it by multiplying the numerator and denominator
> > > by (sqrt(x) − sqrt(3)) or by (−sqrt(x) + sqrt(3)).
> > >
> > > To rationalize a denomonator of sqrt(4), note that
> > > sqrt(4) = 2, which is already rational.
> >
> > Uh ... I think we all know this, or at least I hope we do.
> > My point (see thread title) was that this person appears

> > to suffer from that malady some people get from calculator
> > overuse, where they aren't able to recognize sqrt(4) and
> > sqrt(1) as 2 and 1, and where they think sqrt(4) cancels
> > 4 in sqrt(4)/4 to produce sqrt(1).
> >
> > As for rationalizing denominators, here's a less trivial
> > example for you. We can rationalize the denominator of 1/b,
> > where
> >
> > b = sqrt(2) + sqrt(10) + sqrt(12) + sqrt(56),
> >
> > by multiplying the numerator and denominator by f(b), where
> >
> > f(x) = x^15 − (640)*x^13 + (155,072)*x^11 − (18,296,832)*x^9
> >
> > + (1,125,983,744)*x^7 − (35,305,193,472)*x^5
> >
> > + (491,646,992,384)*x^3 − (1,840,594,812,928)*x.
> >
> > After multiplying, but before reducing, the denominator will be
> >
> > − 525,242,269,696.
> >
>

But can you in general rationalize a denominator of form
sqrt(a) + sqrt(b) + sqrt(c) + sqrt(d) + sqrt(e),
for natural numbers a,b,c,d, and e?
.

- ***References***:
  - ***Can I have fries and a calculator with that?***
    - ◊ *From:* Dave L. Renfro
  - ***Re: Can I have fries and a calculator with that?***
    - ◊ *From:* Virgil
  - ***Re: Can I have fries and a calculator with that?***
    - ◊ *From:* Dave L. Renfro
  - ***Re: Can I have fries and a calculator with that?***
    - ◊ *From:* Kobu

- Prev by Date: ***Re: Average chord***
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