Re: −−− −−− Irrational solutions

Source: http://sci.tech−archive.net/Archive/sci.math/2008−02/msg00432.html

- *From*: Deep <deepkdeb@xxxxxxxxx>
- *Date*: Sun, 3 Feb 2008 05:24:36 −0800 (PST)

On Feb 2, 11:34 pm, quasi <qu...@xxxxxxxx> wrote:

> On Sat, 2 Feb 2008 18:04:43 −0800 (PST), Deep <deepk...@xxxxxxxxx>
> wrote:
>
>> Consider the following equation under the given conditions.
>>
>> R^(1/2) = n^(k−2)[S/T] (1)
>>
>> where S = m^(k−1) − Am^(k−3) + Bm^(k−5) − .. − k
> (2)
>>
>> T = n^(k−1) − An^(k−3) + Bn^(k−5) − ... ..−
> k (3)
>>
>> mn =
> 1 (4)
>>
>> Condition: R is positive rational but not a perfect square.
>> k is a prime > 3, A, B, .. divisible by k
>>
>> Assertion: m = u^(1/2) where u is rational but not a perfect square

will satisfy (1)

You need to declare the restrictions on _all_ your variables.

Let's what you forgot ...

Variables: R, S, T, k, m, n, A,B, ...

Restrictions:

R is a positive rational but not a perfect square.

S,T are what? Presumably positive reals, but you didn't say.

k is a prime, k > 3

mn = 1, but m,n are what? Presumably positive reals,
but you didn't say. You did state an asserted _conclusion_
about m,n but not a declaration of their types in the hypothesis.

A,B, ... are "divisible by k". Thus, A,B, ... are presumably
integers, but you didn't say. Without further specification, one
would have to assume arbitrary integer multiples of k, possibly
zero, possibly negative. If that's not what you intended, you
have to make your restrictions clear.

You are often careless in this regard, and several times in the past
I've made the same objection. You need to declare the types and
restrictions on your variables −− _all_ of them.

Although I can see in advance that for any of the likely
specifications for the missing declarations, your assertion is false,
there's no sense trying to provide a counterexample until you fully
specify all the conditions. Thus, before exposing the hopelessness of
your almost certainly false assertion, please fix your problem
statement. Also, you have a typo in condition (2).

quasi− Hide quoted text −

− Show quoted text −

*** ***

Thank you very much for your comments. Your comments are valid and I
must be careful in defining the problem. Now kindly note the
following:

1. All the variables are real and each > 0
2. Each of the variables A, B, ... is an integer and divisible by k.

3. Prime k > 3
4. S and T are defined in terms of m and n so they are also real.
5. mn = 1
6. My goal is to prove that only m = u^(1/2) will satisfy the
condition R^(1/2) is irrational
and R is rational given u is rational but not a perfect square.

I thank you for your helpful comments and I look forward to hearing
from you about the correctness of the assertion.
.