

Re: sqrt(sin(x))+sqrt(cos(x)) = 1

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From: Jeffrey A. Smith (*kaladan_at_zianet.com*)

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That is how I would do it.

Your original equation is valid in the first quadrant (0, PI/2), so any rotation that returns you to the same quadrant will give you a quartic of the same form.

"Tassilo" <glutroteslicht@midwesternmail.com> wrote in message news:be398bc3.0411040610.247e0de0@posting.google.com...
> "Jeffrey A. Smith" <kaladan@zianet.com> wrote in message news:<4189ab1e\$1@nntp.zianet.com>...
> > *You might consider another approach that is a variation on Robin Chapman's*
> > *post.*
> >
> > *Put $u = \sin x$ then $\cos x$ becomes $\sqrt{1 - u^2}$.*
> > *Then, after substitution and manipulation, you will find a quartic equation*
> > *in u with two real roots (0 and 1) along with a quadratic root (with*
> > *imaginary roots).*
> >
> > *With the roots 0 and 1, you find that x becomes 0 or $PI/2$.*
>
> *Thanks for this good solution. But how to prove that the roots of this*
> *quartic are periodically repeating themselves ?*
>
> *By simply saying "sin and cos functions are periodic ones, so the*
> *roots are: $k*2PI+(PI/2)$ and $k*2PI$, k element of N " ??*
>
> *Thanks again*