

Re: Can I solve these integrals?

Source: <http://sci.tech--archive.net/Archive/sci.math.symbolic/2005-06/msg00049.html>

- *From:* "Peltio" <peltio@xxxxxxxxxxxxxxxx>
 - *Date:* Mon, 20 Jun 2005 20:12:10 GMT
-

"Jerzy Karczmarczuk" wrote

>So, according to 'Peltio' $\int(\sin(x), x=0 \dots \pi)$ cannot be exactly
>computed, since it involves \sin ?

The spirit of my post was trying to understand why the 'closed' solution provided in terms of hypergeometric function was not deemed suitable. The OP already had an exact solution, but it seems that he is bothered with functions whose evaluation might be time consuming.

Besides, in general an expression involving special functions will not lead to an 'exact' number in that its evaluation could end up in an irrational value, or in another expression whose value will have to be approximated. What is the 'exact' value of $\sqrt{2}$ apart from its own expression?

>Moreover, \sin and \cos are NOT special functions.

I put 'special functions' in quotes. But since we are at it, I do not see that much of a difference between a \sin and bessel function, or a sinintegral function for what matters, from an operational point of view. It's just a matter of were to find a routine to compute its values: either built-in or imported. And computing the values is what matters to the OP.

cheers,
Peltio

-
- *Follow-Ups:*
 - ◆ **Re: Can I solve these integrals?**
◇ *From:* Jerzy Karczmarczuk
 - *References:*
 - ◆ **Can I solve these integrals?**
◇ *From:* JH

Re: Can I solve these integrals?

◆ ***Re: Can I solve these integrals?***

◇ *From:* Peltio

◆ ***Re: Can I solve these integrals?***

◇ *From:* JH

◆ ***Re: Can I solve these integrals?***

◇ *From:* Jerzy Karczmarczuk

- Prev by Date: ***Re: maxima, gnuplot, bode plots, exponents***
- Next by Date: ***commutative polynomial ideals in Mathematica and Maple***
- Previous by thread: ***Re: Can I solve these integrals?***