

Re: Writing a real valued expression in a form that does not include $\sqrt{-1}$

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In article

<7098b082-0bb8-4f1d-9d1c-3396dab824ea@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, Szabolcs <szhorvat@xxxxxxxx> wrote:

I was wondering if the following real-valued expression (obtained with a CAS) could be written in a form that does not include the imaginary unit (denoted by i here). I would like to do this without using trigonometric functions (actually this expression is equal to $\cos(\pi/9)$)

$$(1/2)*((1 + i*\sqrt{3})/2)^{1/3} + (4*(1 + i*\sqrt{3}))^{-1/3}$$

Is this possible?

casus irreducibilis

http://en.wikipedia.org/wiki/Casus_irreducibilis

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