

mandelbrot in imaginary space

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 - *Date:* 21 Jun 2005 21:02:58 -0700
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hi,

i've extended the complex plane to 3 and 4 dimensions.

i'm sure this has been done before, but just in case...

the unit of the imaginary axis is i . it is the the root of the negated unit of the real axis.

generalizing to find another orthogonal axis, the unit of another axis is $\text{root}(-i)$. (the root of the negated unit of the imaginary axis)

interestingly, arithmetic in this space uncovers a fourth axis: $\text{root}(i)$

i've got a mandelblob animation with $\text{root}(i)$ axis set to zero and

$\text{root}(-i)$ axis varying from 0 through 1 (time) at

<http://ivorykite.com/4Dmb.html>

if anyone's seen this before and/or has some better quality animations or slices of the mandelbrot, please let me know.

cheers, jack

• *Follow-Ups:*

◆ [*Re: mandelbrot in imaginary space*](#)

◇ *From:* G. A. Edgar

◆ [*Re: mandelbrot in imaginary space*](#)

◇ *From:* #2 Josh

• Prev by Date: [*Pi R Squared*](#)

• Next by Date: [*Re: mandelbrot in imaginary space*](#)

• Previous by thread: [*Pi R Squared*](#)

• Next by thread: [*Re: mandelbrot in imaginary space*](#)

• Index(es):

◆ [*Date*](#)

◆ [*Thread*](#)