

Parity of General Complex Numbers

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In this paper I prove the parity of normal complex numbers, dual numbers, and split complex numbers.

For a single dimension, there are 3 kinds of complex numbers:

$x^2 = -1$	Normal complex number	$x = i$
$x^2 = 0$	Dual complex number	$x = \varepsilon$
$x^2 = 1$	Split complex number	$x = j$

It is known that:

mul[even] \Leftrightarrow or

00 0 If the output is odd, then both inputs must be odd

01 1

10 1

11 1 If the output is even and arguments are equal, then the inputs must be even

Therefore, the parity of general complex numbers can be extended:

i : odd

ε : even

j : odd