

1125-N5-251

Stephan Ramon Garcia* (stephan.garcia@pomona.edu), Department of Mathematics,
Pomona College, 610 N College Ave, Claremont, CA 91711. *If you believe in real numbers and
matrices, then you believe in complex arithmetic!*

The introduction of the complex number system sets the tone for your entire complex-variables course. Important questions abound. Should complex numbers be presented as handed down by the gods? Is i just a symbol with magical properties? Should the properties of complex numbers be derived from more primitive principles? Many instructors are familiar with a matrix-based approach to \mathbb{C} . We push this perspective to its logical extreme and demonstrate that almost all properties of complex arithmetic follow from elementary linear algebra. (Received August 18, 2016)