The Complexity of Complex Numbers

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Abstract

Before the unintentional creation of imaginary numbers, mathematicians had to conclude their negative square-rooted quadratic solutions as impossible to solve. The creation of imaginary numbers did not happen on its own, but through a process of solving cubic equations. Imaginary numbers were then combined with real numbers to create complex numbers. Complex numbers are used in various, modern-day equipment; such as, electrical circuits, cell phones, and also for transmitting radio waves. Understanding complex number is the key to appreciating their existence. This paper acknowledges the significant impact that complex numbers have on today's society and the cultured pattern complex numbers create when they are raised to an nth power. Research on the impact of complex numbers through different mediums was accumulated through strenuous investigation based on previous studies of complex numbers. My investigation was closing the gap between whether or not a pattern existed from raising complex numbers to a power. I exposed evidence that proved that a pattern existed through discussing the binomial theorem; thus, explaining the complexity of benevolent complex numbers.