

# Review of: "From Complex to Real Numbers: A Reverse Detour for Solving Polynomial Equations Using Complex Numbers"

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Potential competing interests: No potential competing interests to declare.

This study presents that by starting with complex numbers, it is possible to arrive at the solution that eventually appears in real number form. In effect, such a procedure follows a reverse detour, i.e., from complex to real numbers. In addition, certain factors are simple when expressed in complex forms. This paper presents methods of solving quadratic, cubic, and quartic equations using complex numbers. The formulation of the method and application of the formulae based on the roots of complex numbers is simple and intuitive to follow. Examples are provided for the application of the methods for solving polynomial equations of degrees less than five. The method shows the power of using complex number arithmetic in solving equations despite the fact that the solution can be a real number. I recommend this paper to be published after making the following changes:

1. Introduction section must be revised as well. It is also a good idea to provide an overview of what happens next in the article at the end of the introduction. In the introduction section, you should write what the advantage of the topic you have studied is and why you chose this topic.
2. The similarity of the paper is higher. The authors should reduce it.
3. At the end of all equations, "COMMA" or "POINT" must be added according to the typing rules. Therefore, they need punctuation and editing to pre-check all the paper.
4. The authors are requested to add more details regarding their original contributions in this manuscript.
5. The English language of the article should be improved.
6. The literature review is poor; you should add related papers such as:
  - a) [https://doi.org/10.1016/S0096-3003\(03\)00745-8](https://doi.org/10.1016/S0096-3003(03)00745-8)
  - b) [https://doi.org/10.1016/S0096-3003\(99\)00223-4](https://doi.org/10.1016/S0096-3003(99)00223-4)
  - c) [https://doi.org/10.1016/S0096-3003\(99\)00063-6](https://doi.org/10.1016/S0096-3003(99)00063-6)
  - d) <https://doi.org/10.1016/j.rinp.2020.103801>
  - e) <https://doi.org/10.1063/5.0053864>
  - f) <https://doi.org/10.1016/j.joes.2021.09.020>
  - g) 10.22075/IJNAA.2022.27491.3621
  - h) 10.22075/IJNAA.2022.26929.3453

