

MATH 1300, Mathematical Explorations

Complex Numbers

One 50-minute class

Activity

- Play around with creating new rules for arithmetic.
- Create a new number ' i ' which has the rule that it is the square root of -1 , and experiment with some arithmetic with it.
- Use this new number and the cubic formula to find a solution to a cubic equation.

Assignments

Read Chapter 2 of Truth, Reasoning, Certainty & Proof.

1. Do investigations 15-18. Read section 2.2.2 and do investigations 23-29. You only need to turn in your solutions to 26-29. What did you think of these exercises? How did they impact your opinion of ordinary arithmetic?
2. Look on the internet to find some applications for complex numbers. Do you find it surprising that they are useful outside of mathematics?

References and resources

[The Art of Mathematics: Truth, Reasoning, Certainty, and Proof](#)