Topics Covered

- Algebraic Operations
- Vectors
  - Vector Spaces
    - Vector Space Operations
  - Vector Axioms
    - Additive Axioms
    - Multiplicative Axioms
    - Distributive Axioms
  - Real Normed Vector Spaces
    - Norm Axioms
  - Complex Vector Spaces and Normed Vector Spaces
- Complex Number Definition
- Complex Number Operations
  Geometric and Algebraic Interpretations
  - Addition
  - Subtraction
  - Scalar Multiplication
  - Multiplication
  - Conjugation
  - Modulus
- Forms
  - Cartesian
  - Polar
  - Euler
- Proof Simplifications
  - $\cos(\alpha, \beta)$
  - $\sin(\alpha, \beta)$
- Solutions
  - What does a solution for a function containing imaginary roots mean?
    - What would it look like?
  - Cubic Solutions
- Rotations