Complex Conjugates

Andrew Elmer

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Topic: Complex Numbers

Connection to Core Curriculum: Secondary Mathematics II -> Use the relation $i^2 = 1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.

Overview: Students will use the "graphing complex numbers" applet online to visualize what happens when a complex number is multiplied by i and by it's conjugate.

Objectives: Students visually see that multiplying by i rotates the point 90 degrees counterclockwise in the first quadrant.
Students also see that multiplying by the conjugate results in a number with $0i$.

Materials Needed: Computer for each participant

Technology: Complex number graphing applet.

Role of Technology: The technology graphs the complex numbers for the students to help students see how complex numbers are manipulated using multiplication.

Web Reference: http://tube.geogebra.org/student/m282331

Activity Plan: 1. Pass out the activity sheet and observe the students. Providing assistance when needed.

Included documents: See attached Task Sheet labeled "Complex Conjugates"

References: