

Complex Conjugates and Quotients #1-12

<p>1. Write the expression in standard form.</p> $3i - 8i^6 + 3i^3 - 4 + 7i - 5i^2$	<p>2. Write the expression in standard form.</p> $8 - \sqrt{-35}$
<p>3. Multiply by the complex conjugate and write in standard form.</p> $(4 - 3i)$	<p>4. Multiply by the complex conjugate and write in standard form.</p> $3 - \sqrt{-40}$
<p>5. Multiply by the complex conjugate and write in standard form.</p> $\sqrt{-36}$ <p>Hint: If you write this in standard form (a + bi) what does it look like? Does it have both a real and imaginary part? Think carefully about what the conjugate is.</p>	<p>6. Multiply by the complex conjugate and write in standard form.</p> $\sqrt{10}$ <p>Hint: If you write this in standard form (a + bi) what does it look like? Does it have both a real and imaginary part? Think carefully about what the conjugate is.</p>
<p>7. Perform the necessary operation to write the expression in fully simplified standard form.</p> $\frac{1 + 4i}{3 + 3i}$	<p>8. Perform the necessary operation to write the expression in fully simplified standard form.</p> $\frac{3}{1 + \sqrt{-4}}$
<p>9. Perform the necessary operation to write the expression in fully simplified standard form.</p> $\frac{i}{3 - 2i} + \frac{2i}{3 + 8i}$	<p>10. Solve using the quadratic formula to write the expression in fully simplified standard form.</p> $9x^2 - 6x + 37 = 0$
<p>11. Solve using the quadratic formula to write the expression in fully simplified standard form.</p> $3x^2 - 2x + 5 = 0$	<p>12. Perform the necessary operation to write the expression in fully simplified standard form.</p> $\sqrt{-7}^5$