

Name:	Date:
-------	-------

Topic:	Class:
--------	--------

Main Ideas/Questions	Notes/Examples						
<p>The Complex Numbers</p> <p>(C)</p>	<p>Consider the number <math>5 + 2i</math>. Because 5 is a real number and <math>2i</math> is a pure imaginary number, they are not like terms and can not be combined. This type of expression is called a <b>complex number</b>.</p> <p>Standard Form of a Complex Number: <input type="text"/></p>						
<p>Adding &amp; Subtracting Complex Numbers</p>	<p>Directions: Simplify the expressions below. Final answers must be in a + bi form.</p> <table border="1"> <tr> <td>1. <math>(-11 + 3i) + (9 + 2i)</math></td> <td>2. <math>(4 + i) + (7 - 5i)</math></td> </tr> <tr> <td>3. <math>(7 - 2i) - (2 + 6i)</math></td> <td>4. <math>6i - (14 - i) + (5 - 3i)</math></td> </tr> </table>	1. $(-11 + 3i) + (9 + 2i)$	2. $(4 + i) + (7 - 5i)$	3. $(7 - 2i) - (2 + 6i)$	4. $6i - (14 - i) + (5 - 3i)$		
	1. $(-11 + 3i) + (9 + 2i)$	2. $(4 + i) + (7 - 5i)$					
3. $(7 - 2i) - (2 + 6i)$	4. $6i - (14 - i) + (5 - 3i)$						
<p>Multiplying Complex Numbers</p> <p><b>**Recall**</b></p>	<p>Directions: Simplify the expressions below. Final answers must be in a + bi form.</p> <table border="1"> <tr> <td>5. <math>2i(8 - 3i)</math></td> <td>6. <math>-i(-2 + 10i)</math></td> </tr> <tr> <td>7. <math>(7 + i)(4 - i)</math></td> <td>8. <math>(2 - 4i)(-5 - 3i)</math></td> </tr> <tr> <td>9. <math>(6 - 2i)^2</math></td> <td>10. <math>(1 + 7i)(9 + 3i) - (4 + 2i)</math></td> </tr> </table>	5. $2i(8 - 3i)$	6. $-i(-2 + 10i)$	7. $(7 + i)(4 - i)$	8. $(2 - 4i)(-5 - 3i)$	9. $(6 - 2i)^2$	10. $(1 + 7i)(9 + 3i) - (4 + 2i)$
	5. $2i(8 - 3i)$	6. $-i(-2 + 10i)$					
	7. $(7 + i)(4 - i)$	8. $(2 - 4i)(-5 - 3i)$					
9. $(6 - 2i)^2$	10. $(1 + 7i)(9 + 3i) - (4 + 2i)$						

Name: \_\_\_\_\_

Unit 4: Solving Quadratic Equations



Date: \_\_\_\_\_ Bell: \_\_\_\_\_

Complex Numbers

**Directions:** Simplify the expressions below.

**1.**  $(11 - 7i) + (2 - 5i)$

**2.**  $(-6 + 10i) - (1 - 2i)$

**3.**  $(-3 + 8i) - (1 + 8i)$

**4.**  $-5i(-2 - i)$

**5.**  $(7 + i)(4 + 3i)$

**6.**  $(-3 - 8i)(1 - 2i)$

**7.**  $(-7 + i)^2$

**8.**  $(3 + 5i)(3 - 5i)$

**9.**  $(5 - 2i)(2 + 7i) - 2i(3i)^2$