Algebra 2

3-01 Complex Numbers (3.2)

Imaginary Number (imaginary unit) *i*

- i = _____
- i^2 = _____

Complex Number

- $a + bi$
- a is _____part
- bi is _____part
- Any number with _____i is called imaginary

$\sqrt{-9}$

$\sqrt{-12}$

Adding and Subtracting Complex Numbers

- _____ like terms

Simplify $(-1 + 2i) + (3 + 3i)$

$(2 - 3i) - (3 - 7i)$

$2i - (3 + i) + (2 - 3i)$

Multiplying complex numbers

- _____
- Remember _____

Multiply $-i(3 + i)$

$(2 + 3i)(-6 - 2i)$

$(1 + 2i)(1 - 2i)$

Complex conjugate

- _____ numbers just _____ sign on the imaginary part
- When you multiply complex conjugates, the product is _____

Dividing Complex Numbers

- To divide, _____ the numerator and denominator by the _____ of the denominator
- No imaginary numbers are allowed in the _____ when simplified

Divide $\frac{2-7i}{1+i}$ $\frac{2i}{2-i}$

105 #1, 3, 5, 7, 17, 19, 21, 23, 25, 29, 31, 33, 35, 37, 39, 43, 49, 51 and division and mixed review = 25