

#3 ~ Sect. 5.6: Complex Numbers (Part 2)

If the sum of two complex numbers is 0, then each number is the opposite, or additive inverse, of the other.

$$a + bi + -a - bi = 0$$

Ex. 1: Find the additive inverse of each number.

a) $-7 - 9i$

b) $-5i$

c) $4 - 3i$

To add or subtract complex numbers, combine the real parts and the imaginary parts separately.

Ex. 2: Simplify each expression.

a) $(3 + 6i) - (4 - 8i)$

b) $(8 + 3i) - (2 + 4i)$

Ex. 3: Find the product.

$$(3i)(8i) =$$

Ex. 4: Find the product.

$$(3 - 7i)(2 - 4i) =$$

Ex. 5: Solve each equation.

$$a) 9x^2 + 54 = 0$$

$$b) -5x^2 - 150 = 0$$

$$c) 8x^2 + 2 = 0$$