

## I. The Imaginary Number (p.613):

$$i = \sqrt{-1} \quad \Rightarrow \quad i^2 = \underline{\hspace{2cm}}$$

## II. Complex Numbers (p.613):

$$\{a + bi \mid a \text{ \& b are real \#s, } i = \sqrt{-1}\}$$

## III. Arithmetic Operations (+, -, ×, ÷):

$(a + bi) \pm (c + di)$ : combine like terms

$(a + bi) \times (c + di)$ : multiply as binomials, *i.e.*, use FOIL

$(a + bi) \div (c + di)$ : use conjugate of denominator “ $c - di$ ”

## IV. Examples (p.616): Problems #2-40(even),44

HW: pp.616-617 / Problems #1-57(every other odd)

Read pp.625-631 (section 9.5)