

Complex Numbers

A Complex Number consist of a Real Part and an Imaginary Part

$$a + bi$$

Real Part Imaginary Part

$$i^2 = -1$$

$$i = \sqrt{-1}$$

$$(a+bi)(a-bi) = a^2 + b^2$$

Lesson 2-4

Complex Numbers

WORKSHEET

1) Simplify

$$(-2 + 5i) + (1 - 7i)$$

$$= \quad - \quad i$$

$$(4 + 6i) - (-1 + 2i)$$

$$= 4 + 6i + \quad - \quad$$

$$= \quad + \quad i$$

2) Simplify using complex conjugate

$$\frac{2+i}{1-i} = \frac{2+i}{1-i} \left(\frac{\quad}{\quad} \right)$$

$$= \frac{\text{F} \quad \text{O} \quad \text{I} \quad \text{L}}{\quad + \quad i + \quad i + \quad}$$

$$= \frac{\quad + \quad i}{\quad}$$

$$= \quad + \quad i$$