Note: $i=\sqrt{-1} \quad i^{2}=-1 \quad i$ is referred to as an imaginary unit
Standard Form Complex Number: a + bi

## Ex 1:

Write the complex number in standard form.
a) $3+\sqrt{-16}$
b) $1+\sqrt{-8}$
c) $-4 i^{2}+2 i$

## Ex 2:

Perform the addition or subtraction and write the result in standard form. $(3+2 i)-(6+13 i)$

## Ex 3:

Perform the operation and write the result in standard form.
$(6-2 i)(2-3 i)$

Ex 4:
a) Write the complex conjugate of the complex number. b) Then multiply the number by its complex conjugate.

$$
-3+\sqrt{2} i
$$

Ex 5:
Write the quotient in standard form.
a) $-\frac{14}{2 \mathrm{i}}$
b) $\frac{5}{1-i}$

Ex 6:
Write the complex number in standard form.
$\sqrt{-5} \cdot \sqrt{-10}$

## Ex 7:

Use the Quadratic Formula to solve the quadratic equation.

$$
9 x^{2}-6 x+37=0
$$

Assignment 2.4
Pg. 167 Vocab \#'s 1,2, 4 Problem Set \#'s 1- 83 ODD
REQUIRED: Vocab, 7, 13, 31, 39, 49, 55, 67, 75, 83

