Daily Lesson Plan **Advanced Math** **Krista Johnson**

Section/Lesson Title: Complex #s /Quiz

Materials: WS, Quiz #1

HW# 3.7 WS

Reflections:

I Complex #s

~ When can you not take a $\sqrt{}$? Why?

→ Expands # system now includes imaginary unit, i

$i = \sqrt{-1}$

If $i = \sqrt{-1}$ what is i^2? i^3? i^4?

A. Operations w/ complex #s ($a+bi$ is a complex #)

$(2+4i) - (6-3i)$

$2+4i-6+3i$

$\boxed{-4+7i}$

$(2+4i)(6-3i)$

$12+24i-6i-12i^2$

$12+24i-6i+12$ ← How?

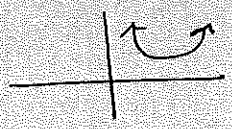
$\boxed{24+18i}$

B. Solving Any Quadratic Eq.

$2x^2-5x+4=0$

$x = \frac{5 \pm \sqrt{25-4\cdot2\cdot4}}{4}$

$x = \frac{5 \pm \sqrt{-7}}{4}$ not real



$\boxed{x = \frac{5 \pm \sqrt{7}\,i}{4}}$ has 2 imaginary roots

What is $\sqrt{-5}$? $\sqrt{5}\,i$

$\sqrt{-9}$? $3i$

II Quiz