Algebra II Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Simplifying Radicals and Complex #’s Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_\_\_\_\_

Homework #6

Simplify each number by using the imaginary number i.

1. $\sqrt{-4}$ 2) $\sqrt{-81}$ 3) $\sqrt{-50}$ 4) 5$\sqrt{-32}$ 5) 3$\sqrt{-100}$

Write each number in the form a + bi.

6) 2 + $\sqrt{-3}$ 7) $\sqrt{-8}$ +8 8) 6 - $\sqrt{-28}$ 9) $\sqrt{-4}$ + 3

10) $-\sqrt{-50}-2 $ 11) $7- \sqrt{-25}$ 12) $\sqrt{-72}+4$

Find the additive inverse of each number.

14) 4i 15) 5 – 3i 16) 9 + i 17) -4 + 7i

Simplify each expression.

18) (2 + 4i) + (4 – i) 19) (-3 – 5i) + (4 – 2i) 20) 6 – (8 + 3i)

21) (12 + 5i) – (2 – i) 22) (-6 – 7i) – (1 + 3i) 23) (-2i)(5i)

Simplify each expression.

24) (-6 – 5i)(1 + 3i) 25) (4 – 3i)(5 + 2i) 26) (8 + i)(2 + 7i)

Review Lesson 5-5

Solve by factoring

27) x2 – 18x – 40 = 0 28) x2 – 6x = 7 29) 2x2 + 5x = 0

Solve by factoring or square rooting.

30) x2 – 49 = 0 31) 16x2 = 81 32) 2x2 – 15 = 59 (Simplify radical answer)

33) x2 + 25 = 0 34) x2 + 36 = 0