Algebra 2 Name_____

Simplifying Complex Numbers

Write the expression as a complex number in standard form.

1) $(4 - 8i) - (3 - 4i)$

2) $(-6 + i) - (-4 - 8i)$

3) $(4i) - 2 + (-2 + 7i)$

4) $(-2i) - (7i) - (1 + 7i)$

5) $(7 + 4i) - (4 + i)$

6) $(8i) - (-5 - 4i) + (2i)$

Use FOIL to multiply and write the expression as a complex number in standard form.

7) $(-3 - 7i)(-2 - 2i)$

8) $(8 - 3i)(-3 - 8i)$

9) $(-2 + 6i)(-2 + i)$

10) $(-3 - 5i)(-2 - 6i)$

11) $(-6 + 2i)(6 + 6i)$

12) $(1 + 4i)(-1 - 2i)$

13) $(-7 + 8i)(2 - 5i)$

14) $(2 + 3i)^2$

Use complex conjugates to simplify and write in standard form.

15) $\dfrac{-8 + 5i}{4 - 6i}$

16) $\dfrac{7i}{-7 - 4i}$

17) $\dfrac{9i}{-10 + 3i}$

18) $\dfrac{7i}{7 + 9i}$

19) $\dfrac{4i}{4 - 5i}$

20) $\dfrac{7i}{4 - i}$

21) $\dfrac{9}{9 + 4i}$

22) $\dfrac{10i}{4 + 6i}$