Name:_____Period:___   **Complex Numbers and Quadratic Equations**

Simplify each:

1. $(3-i)+(5-2i)$

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

3. $(4+2i)-(3+5i)$

4. $(8-3i)(6+9i)$

5. $(2+5i)-(-6+i)$

6. $(-2-3i)(7-i)$

Solve each equation:

7. $x^2+16=0$

8. $4x^2+48=0$

9. $2x^2-5x+1=0$

10. $2x^2+10=4x-2$

11. $x^2-7x=0$

Evaluate each discriminant and tell how many solutions each has and whether they are real or imaginary:

12. $x^2+4x=17$

13. $2x^2+x=-1$

14. $4x^2+1=-4x$