Worksheet #7 - Complex Numbers

1. Simplify $\sqrt{-64}$.

2. Simplify $\sqrt{-48}$.

3. Simplify $\sqrt{-24} - \sqrt{-150}$.

4. Simplify $\frac{2 + \sqrt{-8}}{2}$

5. Solve the equation $x^2 + 16 = 0$. 
6 Use the quadratic formula to solve $x^2 - 4x + 8 = 0$. Simplify your answer completely.

7 Simplify the expression $(4 - 3i)(2 + i)$ completely.

8 Simplify the expression $(a + bi)(a - bi)$ completely.

9 Find a complex number of the form $a + bi$ such that, if you multiply it by $2 - 2i$, you end up with 8.