

In-Class Problems 2 for Wednesday, January 24

These problems are from **Pre-Class Problems 2**.

1. Simplify each expression and write the result in the form $a + bi$.

a. $\frac{-48 + 6i}{12}$ b. $\frac{24 - \sqrt{-72}}{18}$

2. Simplify the power of i .

a. i^{38} b. i^{43}

3. Perform the indicated operations.

a. $(12 + 19i) - (8 - 10i)$ b. $(6 - 3i)(4 + 7i)$

c. $(5 - 9i)^2$ d. $\frac{11 - 5i}{2 + 3i}$ e. $\frac{3 + 8i}{3 - 8i}$

4. Solve the following equations by factoring.

a. $2x(3x + 5) = 11x + 12$ b. $72t^2 - 50 = 0$

5. Solve the following equations using square roots.

a. $3y^2 + 27 = 0$ b. $4(w - 3)^2 - 17 = 63$