Quiz **Name**

1. Compute the product $(3-2i)(2+5i)$ and put it into the form $a+bi$.

2. Draw a polar coordinate system and locate a complex number c in the complex plane that satisfies $c^4 = -1$. Then write it in the form $a+bi$ for specific a and b.

3. Find the general solution of the equation $4y'' - 3y' + 5y = 0$.

Formulas: $e^{i\theta} = \cos\theta + i\sin\theta$; $y = D_1 e^{r_1 x} + D_2 e^{r_2 x}$, $y = D_1 e^{rx} + D_2 x e^{rx}$, and $y = e^{ax}(D_1 \cos bx + D_2 \sin bx)$, where D_1 and D_2 are real constants.