Quiz   **Name**
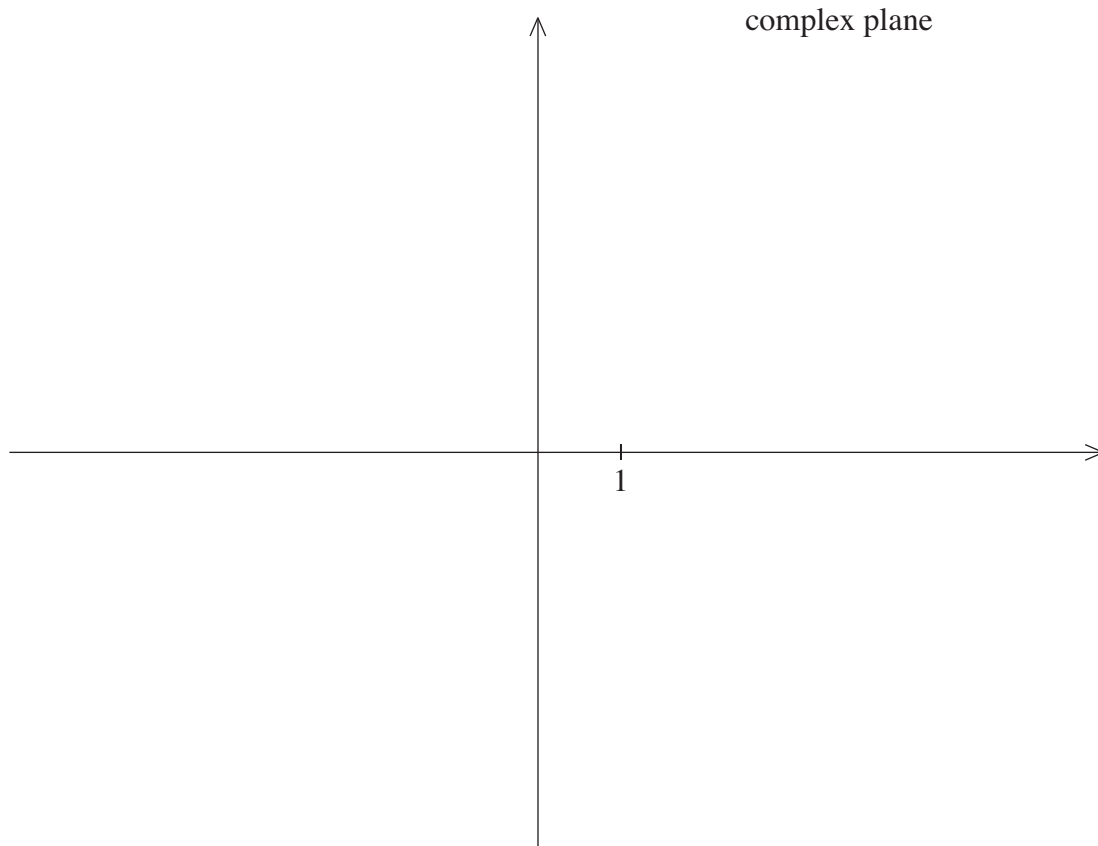
1. Compute the complex numbers $(2+3i)+(-1+i)$ and $(2+3i)(-1+i)$ and locate them accurately in the complex plane below.

complex plane

2. Show that $1 + 2i$ is a root of the polynomial $x^2 - 2x + 5$.

3. Use the formula $c = \cos\theta + i\sin\theta$ to find a number c in the complex plane that satisfies $c^6 = -1$. Place your number into the coordinate plane above and explain why it satisfies the required property.