

$$\frac{3+Ki}{2-3i} = C$$

$$\frac{(3+Ki)(2+3i)}{(2-3i)(2+3i)} = \frac{6+9i+2Ki+3Ki^2}{4+6i-6i-9i^2} =$$

$$\frac{6+9i+2Ki-3K}{4-9(-1)} = \frac{6-3K+(2K+9)i}{13} =$$

$$\frac{6-3K}{13} + \frac{2K+9}{13}i$$

$$\left. \begin{array}{l} \text{Im} \\ \rightarrow \end{array} \right\} \frac{2K+9}{13} = 0$$

$$2K+9=0$$

$$\boxed{K = -\frac{9}{2}}$$

Si $K = -\frac{9}{2}$, C ES UN NÚMERO REAL