Question

Find the fixed, or invariant points of the Möbius transformation $w = \dfrac{(2z-5)}{(z+4)}$.

Answer

We require points $z \overset{w=f(z)}{\longrightarrow} z$

Thus $z = \dfrac{(2z-5)}{(z+4)}$

$\Rightarrow z^2 + 2z + 5 = 0 \Rightarrow z = -1 \pm 2i$