<u>Proof:</u> In imitation of the lemma above, it suffices to map

$$\begin{aligned} A &\to 0 \\ B &\to 1 \\ C &\to \infty \end{aligned}$$

with a map of the form $z \mapsto \dfrac{az+b}{cz+d}$.

Let's see: to get $C \to \infty$ put $z-C$ in the denominator. To get $A \to 0$ put $z-A$ in the ~~matter~~ numerator. Then we have

$$\frac{z-A}{z-C}.$$

(In $LF(\mathbb{C})$, since $\det\begin{pmatrix} 1 & -A \\ 1 & -C \end{pmatrix} = C-A \neq 0$)

Where does 1 go? 1, under this map, goes to $\dfrac{1-A}{1-C}$.

Well, consider $B\left(\dfrac{1-C}{1-A}\right)\left(\dfrac{z-A}{z-C}\right)$. If <u>none</u> of A, B, C are $0, 1, \infty$, I claim this works. Otherwise, special treatment is needed.