

$$f(z) = \sin \frac{1}{z-1} \in H(\mathbb{C} \setminus \{1\})$$

$$\text{zero } \sim 1 + \frac{1}{k\pi}, k \in \mathbb{Z} \setminus \{0\}$$

point singiera $1 \notin \mathbb{C} \setminus \{1\}$

