

Werk

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(2) Now let $f(\zeta_1, \zeta_2)$ be holomorphic in the bicylinder $|\zeta_1| < 1, |\zeta_2| < 1$, continuous in its closure, and vanish on a segment of the line $\theta_2 = k\theta_1$, of the line $\theta_2 = k\theta_1$, of the distinguished boundary $(\zeta_1 = \exp i\theta_1, \zeta_2 = \exp i\theta_2)$ where k is positive and irrational. Write $\zeta_1 = \exp z_1, \zeta_2 = \exp z_2$, and consider the function

$$\phi(z_1, z_2) = f(\exp z_1, \exp z_2), z_j = x_j + iy_j$$

which has the properties required in (1). This function vanishes on the whole straight line $\theta_2 = k\theta_1$, generated by the segment in the distinguished boundary of D . In view of the periodicity of $\phi(iy_1, iy_2)$ and the irrationality of k , the function $\phi(iy_1, iy_2)$ is zero in a dense set and therefore zero identically. Hence $f = 0$.

REFERENCES

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