Domination on sets and in norm

W.K. Hayman
(Imperial College London)

Suppose that f and g are analytic in $\Delta : |z| < 1$. Let B be a space with norm $\| \cdot \|_B$. Let E be a subset of Δ.

- When does
$$|f(z)| \leq |g(z)| \qquad \text{on } E \tag{1}$$
imply
$$\|f\|_B \leq \|g\|_B? \tag{2}$$
In this case, E is called dominating.

- If E is not dominating, can $\|f\|_B$ be arbitrary subject to (1)?