
Karl F. Barth and Philip J. Rippon

On a Problem of MacLane Concerning Arc Tracts

CMFT 4 No.2 (2004), 405–418. [ISSN 1617-9447]

Abstract. G. R. MacLane posed the question of whether a locally univalent function in the MacLane class \mathcal{A} can have an arc tract. We show that the behaviour of any such example must be extremely irregular. We also indicate one possible approach to constructing an example of such a function, which relates MacLane’s question to the ‘type problem’ for certain Riemann surfaces.

Keywords. Asymptotic tract, MacLane class, Koebe arcs, Riemann surface.

2000 MSC. Primary 30D40.

Received. June 14, 2004, in revised form October 23, 2004.