18.112 Functions of a Complex Variable
Fall 2008

Lecture 9: Cauchy-Goursat Theorem

(Text 109-115)

Remarks on Lecture 9

Property (ii) (page 116) of the winding number follows since

$$a \longrightarrow n(\gamma, a)$$

is a continuous function on $\mathbb{C} \setminus \gamma$ and the image of each component is a connected set of integers, hence constant.