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Hillary Einziger* (hillaryre@gmail.com), Department of Mathematics, GWU, Monroe Hall, Room 240, 2115 G St. NW, Washington, DC 20052. *A map from chains in the noncrossing partition lattice to polygon dissections.*

We introduce a surjective map from the set of maximal chains of the lattice of noncrossing partitions of $[n + 1]$ to the set of even polygon dissections of the $(2n + 2)$ -gon. There is a clear correspondence between the product of the intervals in the chain and the sizes of the regions of the dissection. We use this map to define an explicit formula for the antipode in the incidence Hopf algebra of noncrossing partition lattices. (Received September 22, 2009)