

1072-20-239

Hanna Bennett*, hbennett@umich.edu. *Volume distortion in groups.*

Given a space X with subspace Y , a $(k - 1)$ -cycle in Y can be filled in two ways: either by restricting to k -chains in Y , or by allowing chains in all of X . The k -volume distortion function for Y in X gives a measure of the difference between the minimal volumes of such fillings. When groups G and H act on X and Y geometrically as a pair, we can use this to define the k -volume distortion of H in G . We will define these functions and compute some examples. (Received June 28, 2011)