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COMPARING NORMAL FORMS OF ARTIN Braid GROUPS

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Abstract of Talk: We introduce Artin braid groups and discuss three presentations of B_3 , the Artin braid group on three strands. Each presentation induces a different normal form for words in B_3 ; we compare these normal forms. The Cayley digraph suggests two ways to accomplish this. We count the number of boxes in the planar disk between the two paths, and we measure the maximum length of a geodesic between corresponding points on the two paths.