1116-20-845 Mark Greer (mgreer@una.edu) and Lee Raney* (lraney@una.edu), University of North Alabama, Florence, AL. Constructions from Groups to Loops.

Given a group G, we discuss some interesting modifications of the group operation in order to induce a loop (G, \circ) . Of particular interest is a remarkable construction known as the Baer Trick: Given a uniquely 2-divisible group G, define $x \oplus y = xy[y, x]^{1/2}$. We will examine the structure of these Baer trick loops (G, \oplus) in general and survey a few known results. We will then discuss necessary and sufficient conditions that the group G should satisfy in order to guarantee a certain desirable loop structure on the corresponding Baer trick loop. (Received September 14, 2015)