

When working on Gauss diagrams, the result from the paper *Reidemeister moves in Gauss diagrams* by Ganzell, Sandy, et al is found to be useful when dealing with Reidemeister move 3.

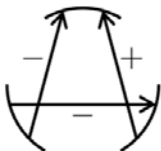
The main result of the paper is the following theorem

Theorem

A triple of chords is R3-movable if and only if it is matched and its chords all have the same 3-sign.

3-sign of a chord is the product of 3 factors:

- the sign of the chord (+1 or -1)
- the direction of the chord (+1 if counterclockwise, -1 if clockwise)
- the number of chords it crosses in the triple (+1 if even, -1 if odd)



When a triple of chords is 3-movable, the effect of the R3 move on the Gauss diagram is to switch the two chord ends on each of the three arcs.