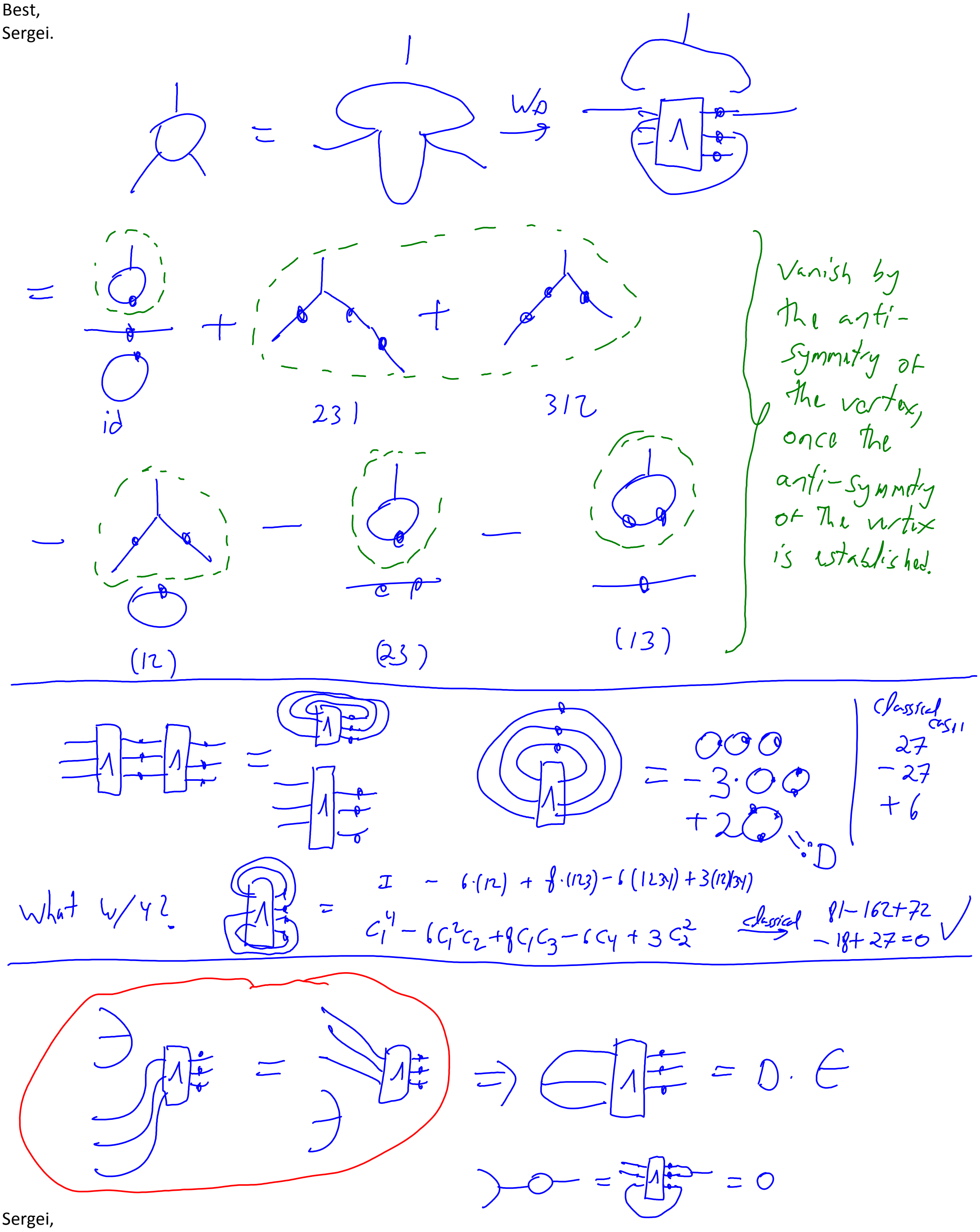
Duzhin on June 5

June-05-11
10:15 PM

Continues 2011-05 (previous month)

Date: Sun, 5 Jun 2011 23:39:31 +0400 (MSD)
From: duzhin@...
To: Dror Bar-Natan <drorbn@math.toronto.edu>
Subject: Re: kleinian weight systems

Dror,
I've been thinking a lot about your writing. Something does not work out for me. Let's take a simple example, a wheel with 3 spokes, leaving aside the obvious fact that it is 0. Just applying your construction, pairing off 2 of the 3 trivalent vertices, what we get? We'll get 3 lines with a lambda-box in between, but then 2 of those lines will be connected into circles, and besides, one of those circles will have an extra leg on it. How do you prove that the w_D evaluates to 0 on this object?
Best,
Sergei.



Sergei,

The purpose of the "rerouting relation" from one of my previous notes was to ensure that all ways of "replacing a pair of trivalent vertices" by a "Lambda" are equivalent. I was careless - the rerouting relation is sufficient for that purpose if there is an even number of trivalent vertices to start with, but not if there is an odd number. For the odd (and greater than 1) case I think you'd need to add the relation circled in red above; I'm not sure what the consequences of that are. Yet note that it implies the AS relation for diagrams with more than one internal vertex.

Best,

Dror.