A Borromean Computation

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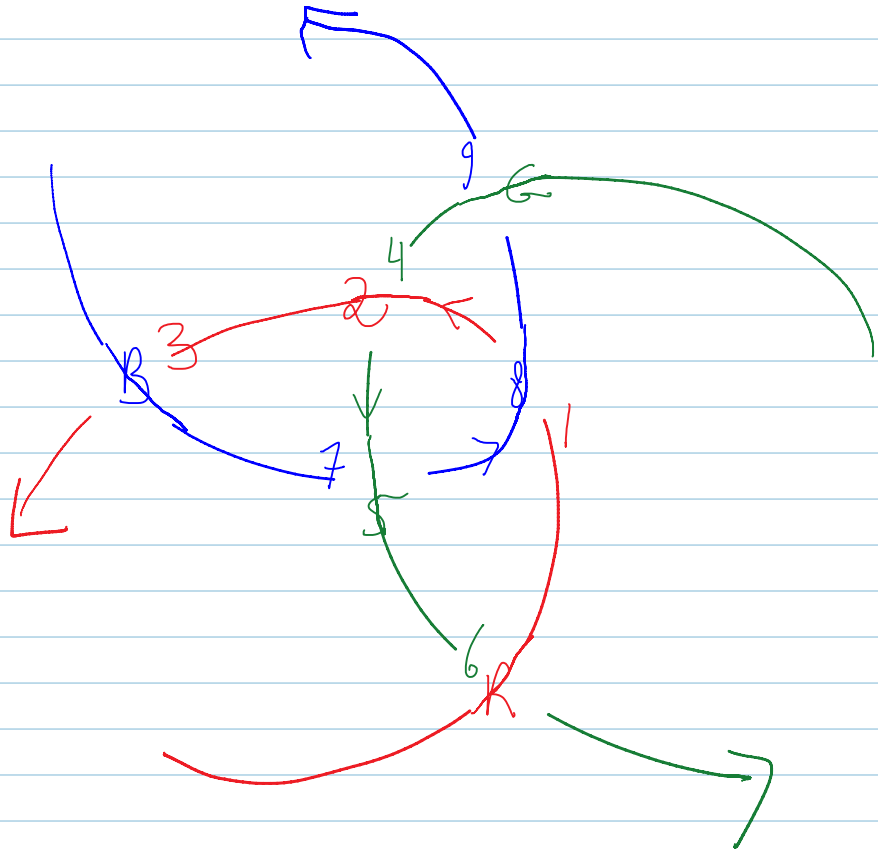

$$R^{-}_{r,6}\ R^{+}_{2,4}\ R^{-}_{9,9}\ R^{+}_{5,7}\ R^{-}_{6,3}\ R^{+}_{8,1}$$

From Projects/MetaMonoids/betaStudy-2.nb:

The Borromean Link

In[25]:= $\beta = (R^-)_{r,6}\,(R^+)_{2,4}\,(R^-)_{g,9}\,(R^+)_{5,7}\,(R^-)_{b,3}\,(R^+)_{8,1}$

Out[25]=
$$\begin{pmatrix} 1 & h_1 & h_3 & h_4 & h_6 & h_7 & h_9 \\ t_2 & 0 & 0 & -1+T_2 & 0 & 0 & 0 \\ t_5 & 0 & 0 & 0 & 0 & -1+T_5 & 0 \\ t_8 & -1+T_8 & 0 & 0 & 0 & 0 & 0 \\ t_b & 0 & -\frac{-1+T_b}{T_b} & 0 & 0 & 0 & 0 \\ t_g & 0 & 0 & 0 & 0 & 0 & -\frac{-1+T_g}{T_g} \\ t_r & 0 & 0 & 0 & -\frac{-1+T_r}{T_r} & 0 & 0 \end{pmatrix}$$

In[26]:=
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Do[β = β // gm_{rk→r}, {k, 1, 3}];
Do[β = β // gm_{gk→g}, {k, 4, 6}];
Do[β = β // gm_{bk→b}, {k, 7, 9}];
β /. {T_c_ ↦ c}
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Out[29]=
$$\begin{pmatrix} \frac{1-2b+b^2-2g+3bg-b^2g+g^2-bg^2-2r+3br-b^2r+3gr-3bgr+b^2gr-g^2r+bg^2r+r^2-br^2-gr^2+bgr^2}{bgr} \\ t_b \\ t_g \\ t_r \end{pmatrix}$$