\[ R = \mathbb{Q}[C; \mathcal{D}] \]

\[ M_A = \{ w \in \mathbb{K} : \forall i \in E \} \]

\[ \mathfrak{d}_0(S) \xrightarrow{x} \mathfrak{a}_0(S) \]
\[ \downarrow \mathfrak{m}^{xy} \]
\[ \downarrow \mathfrak{m}_1^{xy} \]

\[ \mathfrak{d}_0(S) \xrightarrow{x} \mathfrak{a}_0(S') \]

**Question.** Determine the \( \mathfrak{a} \)-side \( M^{xy} \) \& \( C_x \). [They are non-linear!]

"one-colour-Euler"

**Methodology.** Apply the Euler operator \( E \) on the \( \mathfrak{a} \) side;

it commutes with \( M^{xy} \) \& \( C_x \) and it is injective.

Extend \( \mathfrak{d} \) to \( \mathfrak{d}^E \) so that there would be an Euler operator on the \( \mathfrak{d} \) side as well.
Write $a_{12,13}$ in terms of $a_{4,5,6}$.

In first pass, with $a_{pq} := t_{pq}$,

$$M = \alpha A_{zz} + \beta A_{zy} + \gamma A_{yx}$$

I'm only using "multiplication" here, not using specific properties of conjugation. There has to be a better way to go!

$$u_1 = \frac{1}{x-1} \frac{1}{y} \frac{1}{x} = \frac{x}{x-1} \frac{1}{y} \frac{1}{x}$$

$$u_2 = \frac{1}{x-1} \frac{1}{y} \frac{1}{x}$$

$$= \frac{e^{x C_2 + y C_1}}{x C_2 + y C_1} \left( x C_1 u_2 + y C_y u_1 \right)$$

$$- e^{x C_2 + y C_y} d$$

$$= \frac{e^{x C_2 + y C_1}}{x C_2 + y C_1} \left( x C_1 u_2 + y C_y u_1 \right)$$

$$u_2 = \frac{1}{x-1} \frac{1}{y} \frac{1}{x} = \frac{x}{x-1} \frac{1}{y} \frac{1}{x}$$