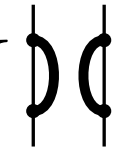
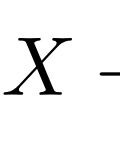
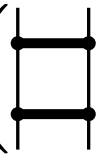
$$\mathcal{J}_2 = -X$$ 

$$\mathcal{J}_2^2 = -\left(X + X^3\right)$$ 

In the basis

$\left($  $,$  $\right)$

this acts by right multiplication as

$$\begin{pmatrix} 0 & -X \\ 0 & 1+X^2 \end{pmatrix}$$

and by left multiplication by

$$\begin{pmatrix} 0 & -X \\ 0 & 1+X^2 \end{pmatrix}$$