Info

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Mat$(2, \mathbb{C})$

conjugacy classes

type of conjugacy classes	JNF J	J^n	$\exp J$ Exponential on Mat$_{\mathbb{C}}(2)$	flow $\exp tJ$	invariants that uniquely determines it	topology in $\frac{\text{Mat}_{\mathbb{C}}(2)}{\text{conj}(GL_{\mathbb{C}}(2}$
diagonalizable with eigenvalue $\{\lambda_1, \lambda_2\}$	$\begin{bmatrix} \lambda_1 & 0 \\ 0 & \lambda_2 \end{bmatrix}$	$\begin{bmatrix} \lambda_1^n & 0 \\ 0 & \lambda_2^n \end{bmatrix}$	$\begin{bmatrix} e^{\lambda_1} & 0 \\ 0 & e^{\lambda_2} \end{bmatrix}$	$\begin{bmatrix} e^{t\lambda_1} & 0 \\ 0 & e^{t\lambda_2} \end{bmatrix}$	characteristic polynomial is $\det(XI_2 - A$ and $\dim +_{i=1}^{2} \ker$	
one eigenvector only with eigenvalue λ	$\begin{bmatrix} \lambda & 1 \\ 0 & \lambda \end{bmatrix}$	$\begin{bmatrix} \lambda^n & n\lambda^{n-1} \\ 0 & \lambda^n \end{bmatrix}$	$e^{\lambda} \begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}$	$e^{t\lambda} \begin{bmatrix} 1 & t \\ 0 & 1 \end{bmatrix}$	characteristic polynomial is $\det(XI_2 - A$ and $\dim \ker(\lambda I_2$	

Current note has 1 direct children and 1 total descendants.

- squishy
  - Mat$_{\mathbb{C}}(2)$
    - Exponential on Mat$_{\mathbb{C}}(2)$

And it has 30 siblings.

- squishy
  - $SL(2)(\mathbb{R}) \curvearrowright \mathbb{R}^2$
  - $SL(2)(\mathbb{R}) \curvearrowright H^2_{\text{U}}$
  - Mat$_{\mathbb{C}}(2)$
  - $A_{r} \text{\textbackslash}\langle z \mapsto \lambda z \rangle \backslash \mathbb{R}\boldsymbol{H}^2_{\text{U}}$
  - $\mathbb{C} \setminus \{0\} \text{\textbackslash}\langle z \mapsto z+1 \rangle \backslash \mathbb{R}\boldsymbol{H}^2_{\text{U}}$
  - $\mathbb{C} \setminus \{0,1\} \text{\textbackslash} PSL(2)(\mathbb{Z})[2] \backslash \mathbb{R}\boldsymbol{H}^2_{\text{U}}$
  - $\mathbb{R} \ltimes_{\theta} \mathbb{C}^2$
  - $\boldsymbol{Cl}(\mathbb{R}^n, \langle\ ,\ \rangle_{0,n})$
  - $\mathbb{C}^n$
  - $U(\mathbb{C} \setminus \{0\})$
  - $PSL(2)(\mathbb{C}) \curvearrowright \mathbb{C}P^1 \cong_{\text{Man}} S^2$
  - $\mathbb{C}P^n$
  - Farey graph, complex and tree
  - GL
  - Heisenberg group
  - Incomplete hyperbolic polygon mod side-pairing
  - $\mathbb{R}\boldsymbol{H}^2, \mathbb{R}H^2_{\text{U}}, D^2$
  - $\mathbb{R}\boldsymbol{H}^n$
  - D_n lattice
  - Matrices
  - Mat$_{\mathbb{R}}(2)$
  - Mobius endomorphisms
  - Elementary group with finite and infinite sided Dirichlet polyhedra
  - Polynomials
  - $T^*S^1 \ncong_{\text{Sym}} (\mathbb{R}^2 \setminus \{0\}, \mathrm{d}x \wedge \mathrm{d}y)$
  - $Z\left(\sum_{1 \le j \le n} z_j^2 - 1\right)(\mathbb{C}) \cong_{\text{Sym}} T^*S^{n-1}$
  - SL
  - SO
  - Seifert–Weber dodecahedral 3-manifold
  - $U(n, \mathbb{C})$