MIT MATHLETS

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LINEAR PHASE PORTRAITS: MATRIX ENTRY

The type of phase portrait of a homogeneous linear autonomous system -- a companion system for example -- depends on the matrix coefficients via the eigenvalues or equivalently via the trace and determinant.
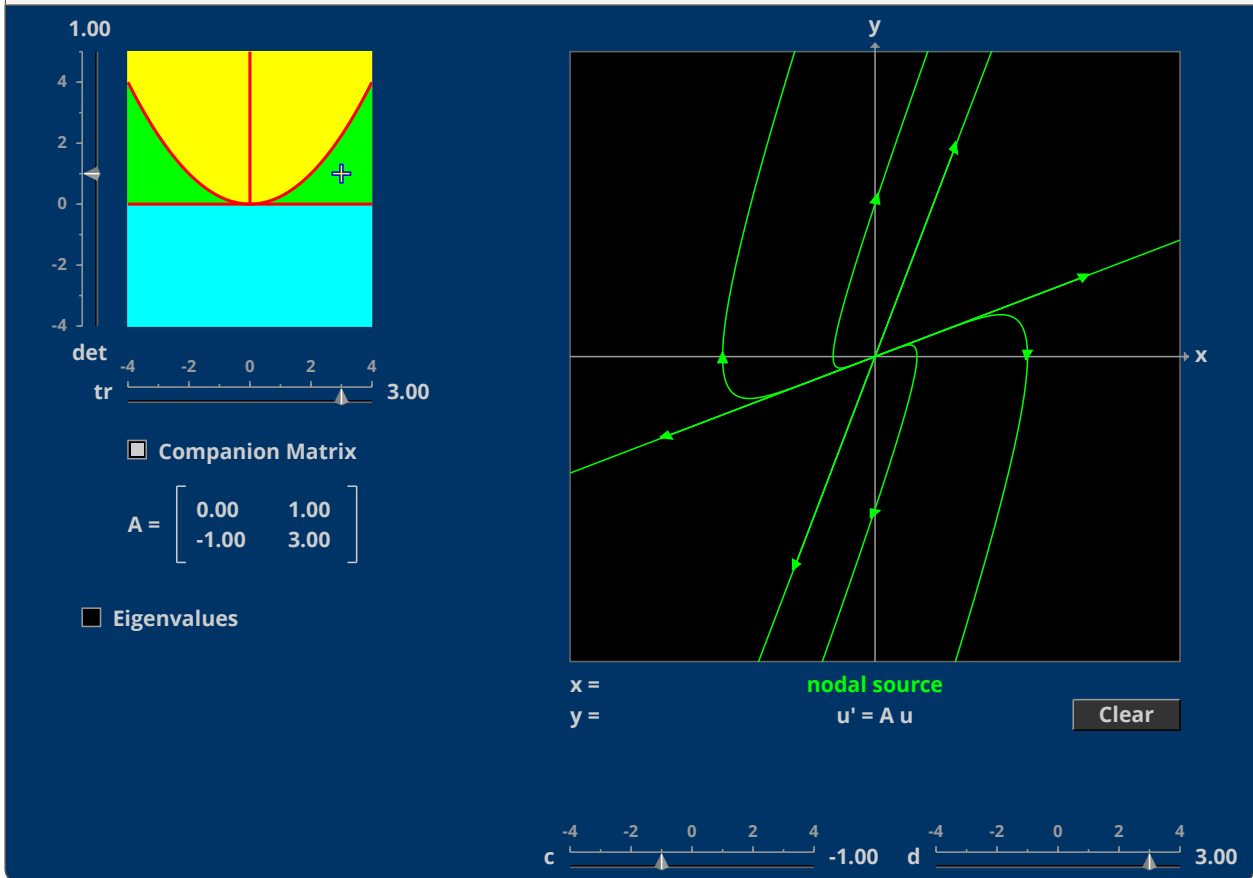
| Mathlet | Description | Activity | Comments |

LINEAR PHASE PORTRAITS: MATRIX ENTRY   mode   + help

1.00

det

tr   3.00

☐ **Companion Matrix**

$$A = \begin{bmatrix} 0.00 & 1.00 \\ -1.00 & 3.00 \end{bmatrix}$$

☐ **Eigenvalues**

x =
y =   **nodal source**
                       u' = A u   [Clear]

c   -1.00   d   3.00