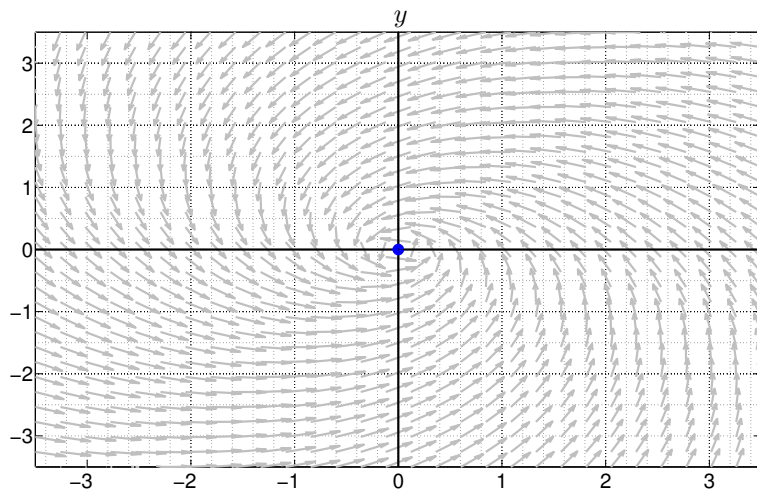


§3.4: SOLUTIONS AND STABILITY - COMPLEX EIGENVALUES

Find the general solution to the following linear system of equations:

$$\frac{d\mathbf{y}}{dt} = \begin{bmatrix} -2 & -3 \\ 3 & -2 \end{bmatrix} \mathbf{y}$$



Consider the system:

$$\frac{d\mathbf{y}}{dt} = \begin{bmatrix} -2 & -3 \\ 3 & -2 \end{bmatrix} \mathbf{y}$$

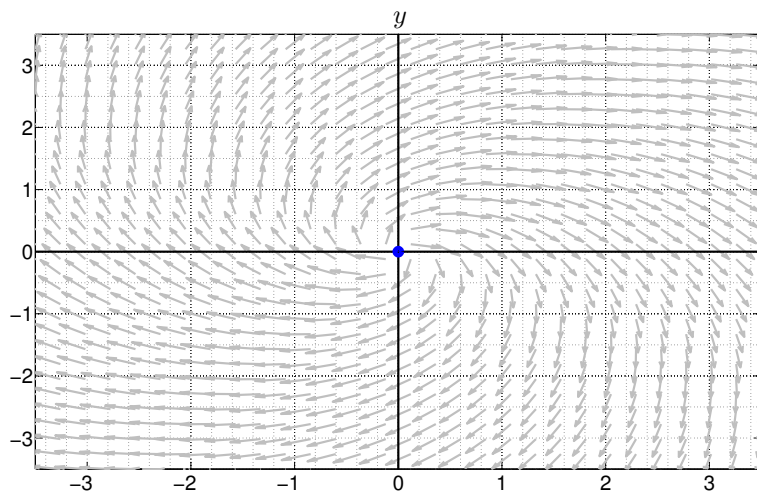
Eigenvalues:

Eigenvectors:

Gen. Sol. :

$$x(t) =$$

$$y(t) =$$



Consider the system:

$$\frac{d\mathbf{y}}{dt} = \begin{bmatrix} 2 & 3 \\ -3 & 2 \end{bmatrix} \mathbf{y}$$

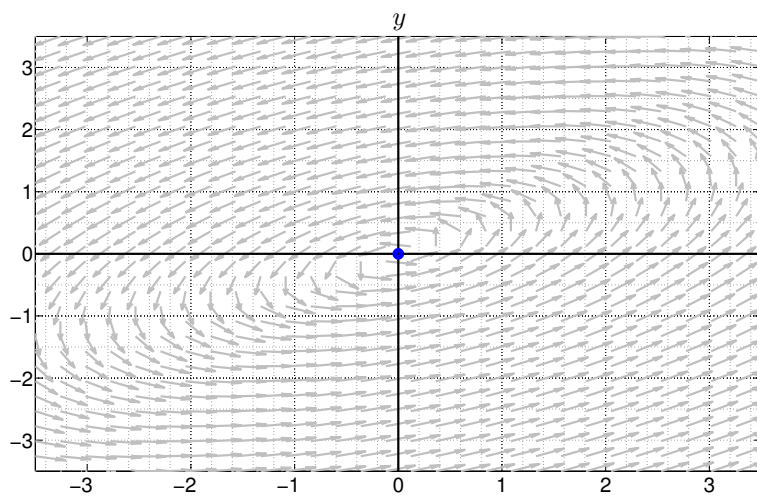
Eigenvalues:

Eigenvectors:

Gen. Sol. :

$$x(t) =$$

$$y(t) =$$



Consider the system:

$$\frac{d\mathbf{y}}{dt} = \begin{bmatrix} 3 & -9 \\ 4 & -3 \end{bmatrix} \mathbf{y}$$

Eigenvalues:

Eigenvectors:

Gen. Sol. :

$$x(t) =$$

$$y(t) =$$