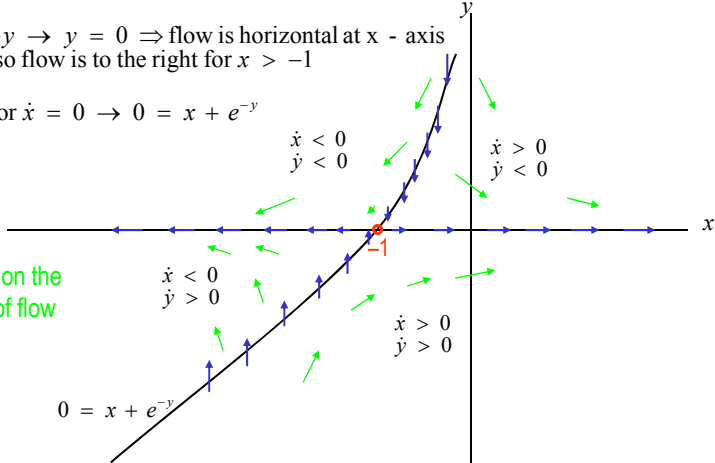$\dot{y} = 0$ for $0 = -y \to y = 0 \Rightarrow$ flow is horizontal at x - axis
$\dot{x} = x + 1$ here, so flow is to the right for $x > -1$

Flow is vertical for $\dot{x} = 0 \to 0 = x + e^{-y}$

$\dot{x} < 0$
$\dot{y} < 0$

$\dot{x} > 0$
$\dot{y} < 0$

$\dot{x} < 0$
$\dot{y} > 0$

$\dot{x} > 0$
$\dot{y} > 0$

The nullclines partition the space into classes of flow direction:

$\dot{x}, \dot{y} \begin{Bmatrix} \langle \\ \rangle \end{Bmatrix} 0$

$0 = x + e^{-y}$

−1