

Name: _____ Sort #: _____

Worksheet 21: Complex Eigenvalues

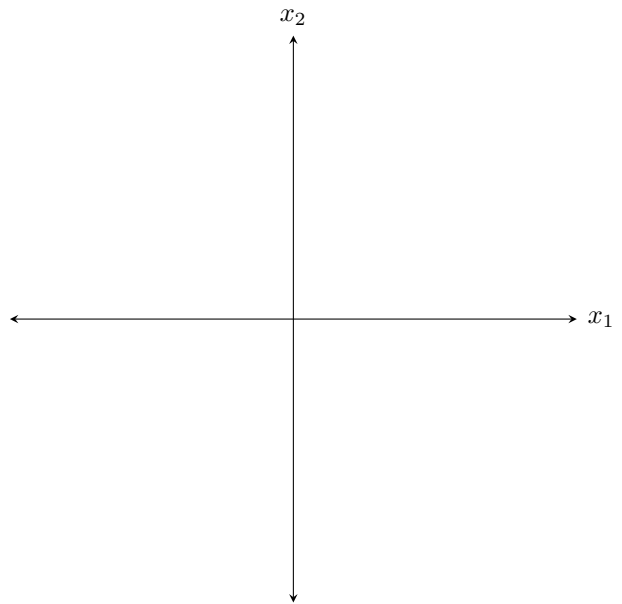
MATH 2310, Spring 2019

Grade: _____ / 40

1. (20 pts) Find the general solution of the system of equations

$$\mathbf{x}' = \begin{bmatrix} -1 & -4 \\ 1 & -1 \end{bmatrix} \mathbf{x}$$

and draw a phase portrait for the system on the axes provided to the right.



2. (20 pts) Find the general solution of the system of equations

$$\mathbf{x}' = \begin{bmatrix} 2 & -5 \\ 1 & -2 \end{bmatrix} \mathbf{x}$$

and draw a phase portrait for the system on the axes provided to the right.

