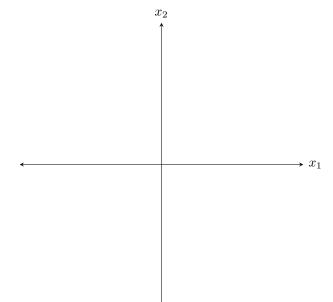
## Worksheet 15 Applications to ODEs

MATH 2250, Fall 2018

 $1. \ \, {\rm Find \ the \ general \ solution \ of \ the \ system} \\ \ \, {\rm of \ equations}$ 

$$\vec{x}' = \begin{bmatrix} 1 & -2 \\ 3 & -4 \end{bmatrix} \vec{x}$$

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



2. Find the general solution of the system of equations

$$\vec{x}' = \begin{bmatrix} 2 & -1 \\ 3 & -2 \end{bmatrix} \vec{x}$$

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

