

HOMWORK 27

Draw the phase portraits for the following linear systems

1.

$$\begin{cases} x' = 2x + y \\ y' = x + 2y \end{cases}$$

2.

$$\begin{cases} x' = -2x + y \\ y' = x - 2y \end{cases}$$

3.

$$\begin{cases} x' = -2x + 3y \\ y' = -x + 2y \end{cases}$$

4.

$$\begin{cases} x' = 3x + y \\ y' = -x - 3y \end{cases}$$

5.

$$\begin{cases} x' = x + 2y \\ y' = 2x - y \end{cases}$$