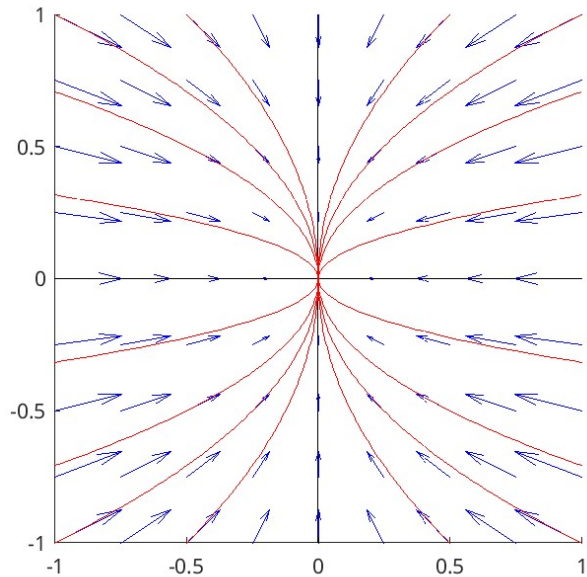


$$\textcircled{1} \quad \begin{aligned} x' &= -2x \\ y' &= -y \end{aligned}$$

first integrals

$$V = \frac{y^2}{x} \text{ in } \mathbb{R}^2 \setminus \{x=0\}$$

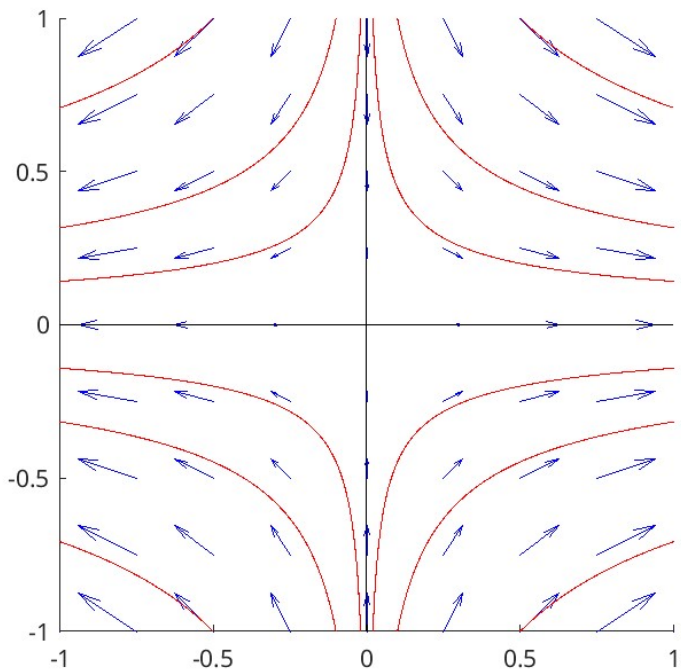
$$V = \frac{x}{y^2} \text{ in } \mathbb{R}^2 \setminus \{y=0\}$$



$$\textcircled{2} \quad \begin{aligned} x' &= 2x \\ y' &= -y \end{aligned}$$

first integral:

$$V = xy^2 \text{ in } \mathbb{R}^2$$



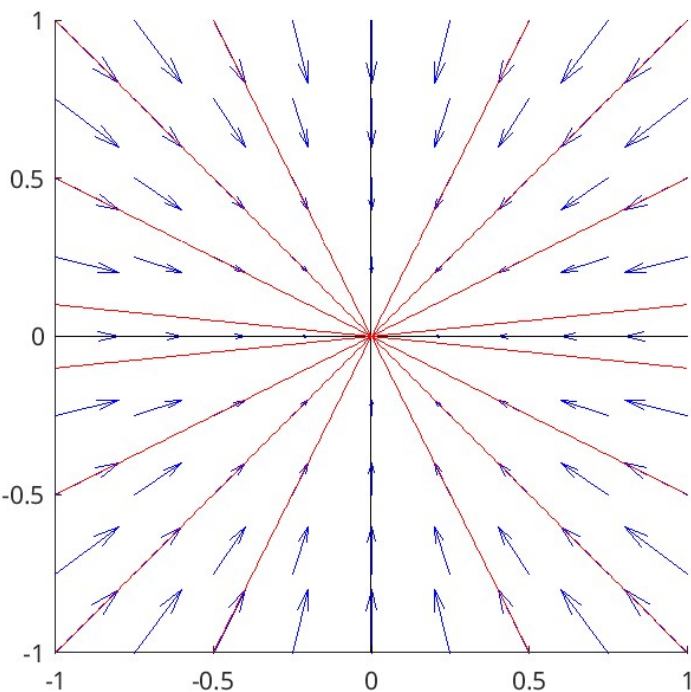
3  $x' = -2x$   
 $y' = -2y$

---

first integrals:

$$V = \frac{y}{x} \text{ in } \mathbb{R}^2 \setminus \{x=0\}$$

$$V = \frac{x}{y} \text{ in } \mathbb{R}^2 \setminus \{y=0\}$$



4  $x' = -2y$   
 $y' = 2x$

---

first integral:

$$V = x^2 + y^2$$

