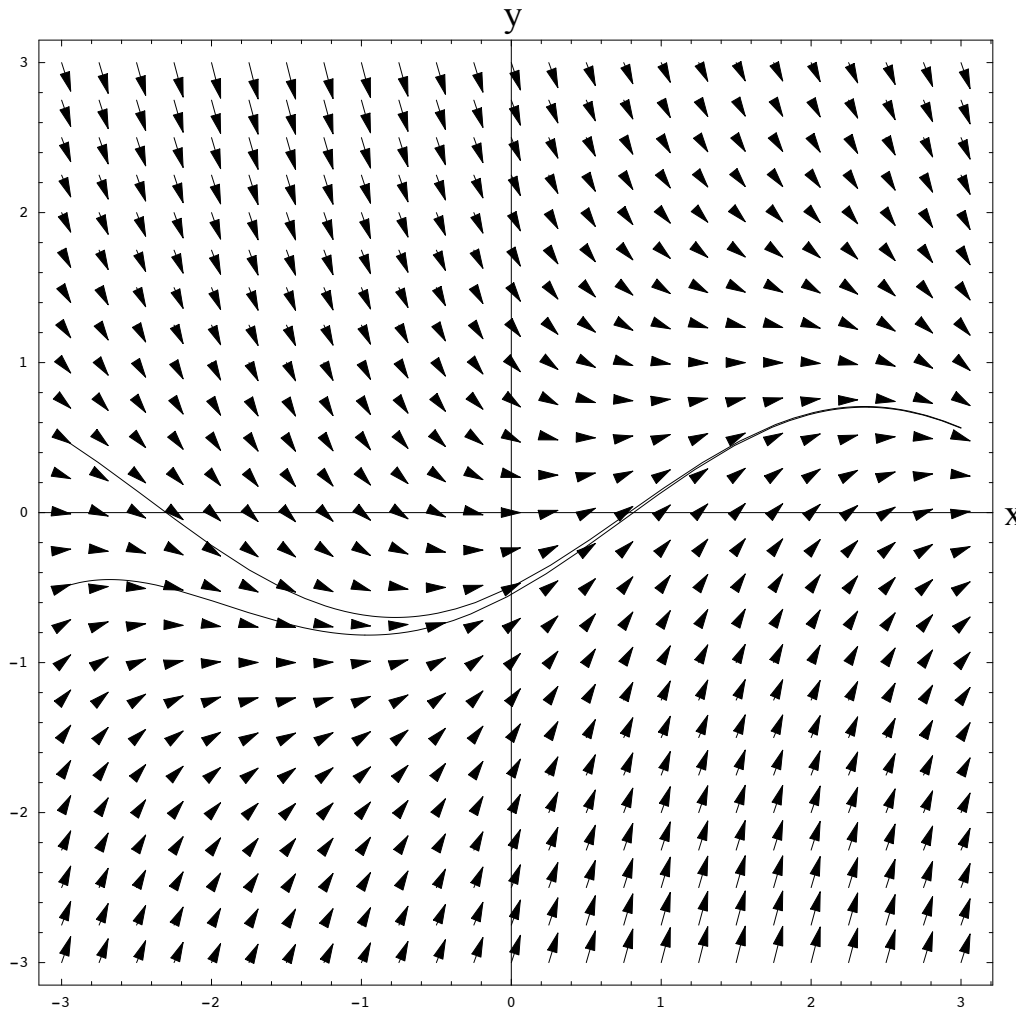


Math 3280 Worksheet 2: Slope fields.

Group members (2 to 4): \_\_\_\_\_

Only hand in 1 sheet per group.

- (1) Sketch in the solution curves  $y(x)$  with initial conditions  $y(-3) = 1$  and  $y(3) = 1$ . Briefly describe how other solutions behave as  $x$  increases.



- (2) Match the following ODEs to the graphs below, which show some representative solutions. In each plot, the  $x$ -axis is horizontal and the  $y$ -axis is vertical. For each match briefly explain your reasoning.

(a)  $y' = \sin(xy)$

(b)  $y' = y^2 - 1$

(c)  $y' = 2x + y$

(d)  $y' = \sin(x) \sin(y)$

(e)  $y' = y/x^2 - 1$

(f)  $y' = \sin(3x)$

