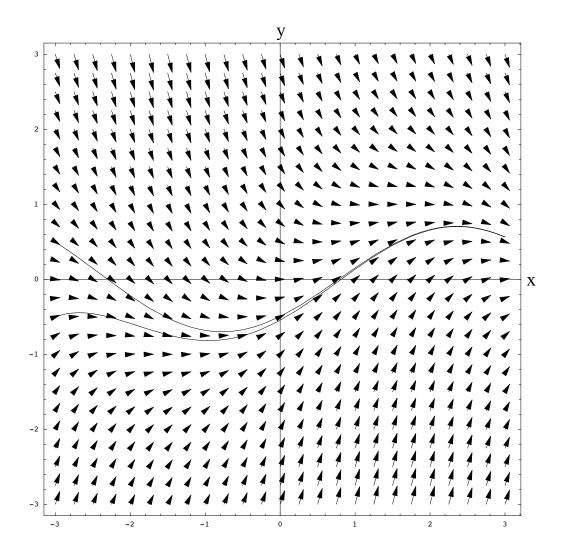
Group members (2 to 4):

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

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

