

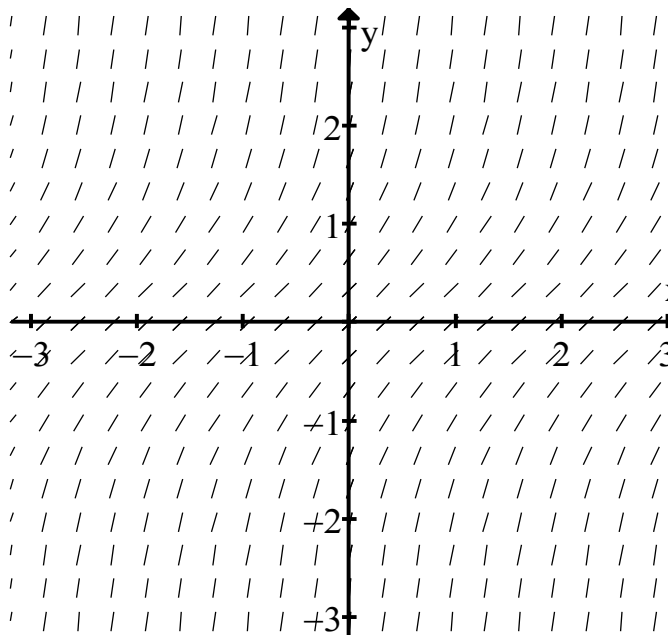
Math 265B: Differential Equations, Slope Fields and Analytical Solutions

Consider the following four differential equations:

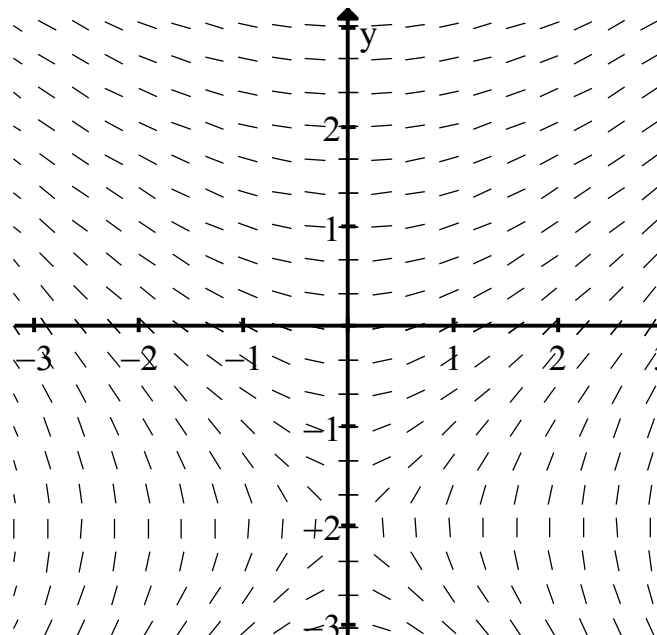
(i) $y'(t) = \frac{t}{2+y}$ (ii) $y'(t) = \cos(t+y)$ (iii) $y'(t) = 1+y^2$ (iv) $y'(t) = ty$

- (a) Match each differential equation with the corresponding slope field. (See next page for two more slope fields)
(b) For each differential equation, sketch the solution curves that pass through each of the points $(0, 0)$, $(0, -1)$ and $(0, 1)$.
(c) Find the General Solution for each differential equation using Separation of Variables, **if possible**.

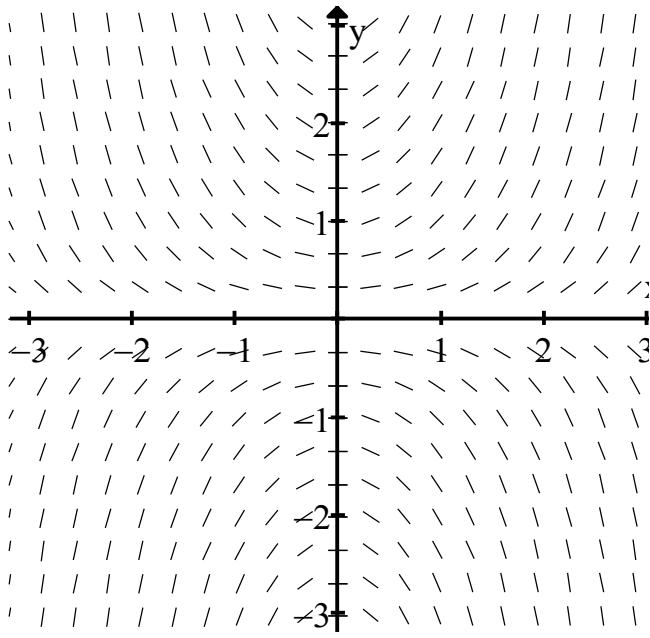
1.



2.



3.



4.

