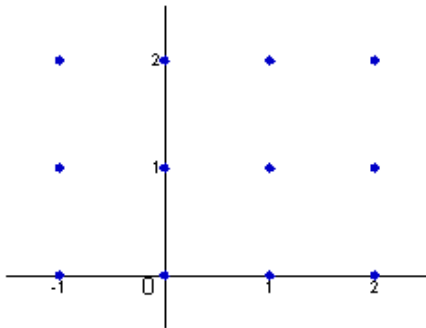


Notes: Slope Fields

Consider the differential equation $\frac{dy}{dx} = 2x - y$.

a.) On the axes provided, sketch a slope field for the given differential equation at the twelve points indicated, and sketch the solution curve that passes through the point (0,1)

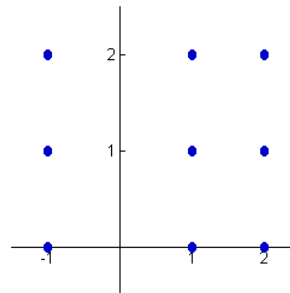


Application of Integration Day 7

Consider the differential equation $\frac{dy}{dx} = \frac{y-1}{x^2}$,

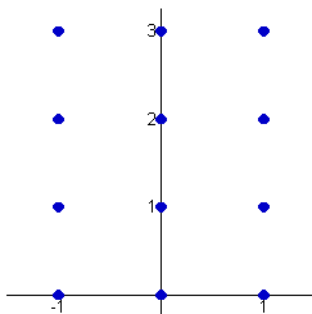
where $x \neq 0$.

a.) On the axis provided, sketch a slope field for the given differential equation at the nine points indicated.



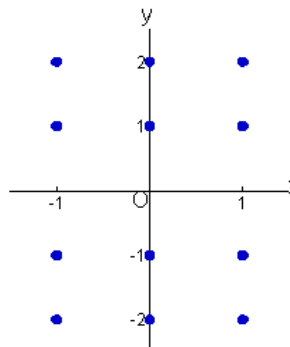
Consider the differential equation $\frac{dy}{dx} = x^2(y-1)$.

a.) On the axis provided, sketch a slope field for the given differential equation at the twelve points indicated.



Consider the differential equation $\frac{dy}{dx} = -\frac{2x}{y}$.

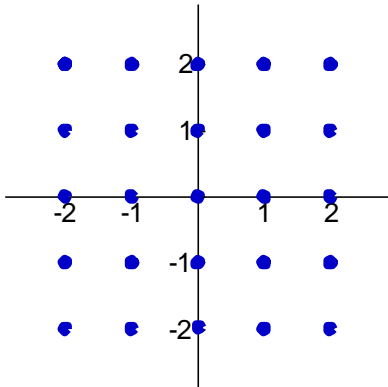
a.) On the axes provided, sketch a slope field for the given differential equation at the twelve points indicated.



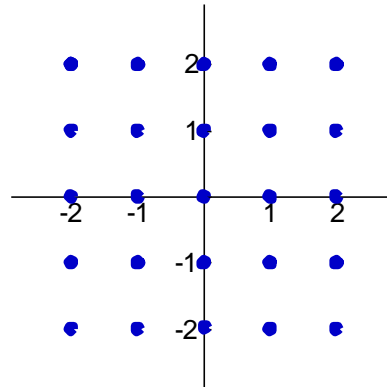
For each of the following differential equations, find the following

- The slope field for the differential equation at the indicated points,
- The general solution of the differential equation graphed, and
- The graph of the particular solution when $y(0)=0$.

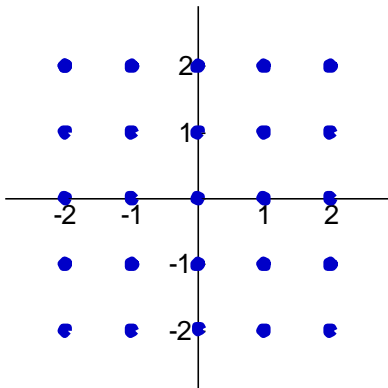
1. $\frac{dy}{dx} = x^2 - x$



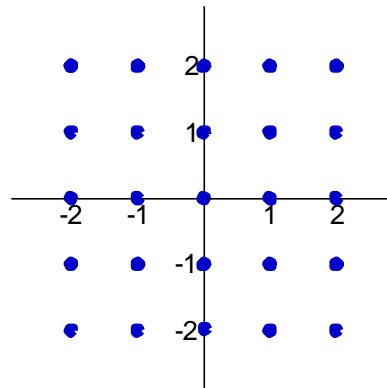
2. $\frac{dy}{dx} = 2^x$



3. $\frac{dy}{dx} = \frac{1}{x}$



4. $\frac{dy}{dx} = -\frac{x}{2}$



For each of the following slope fields, find the following

- The differential equation graphed, and
- The general solution of the differential equation graphed.

