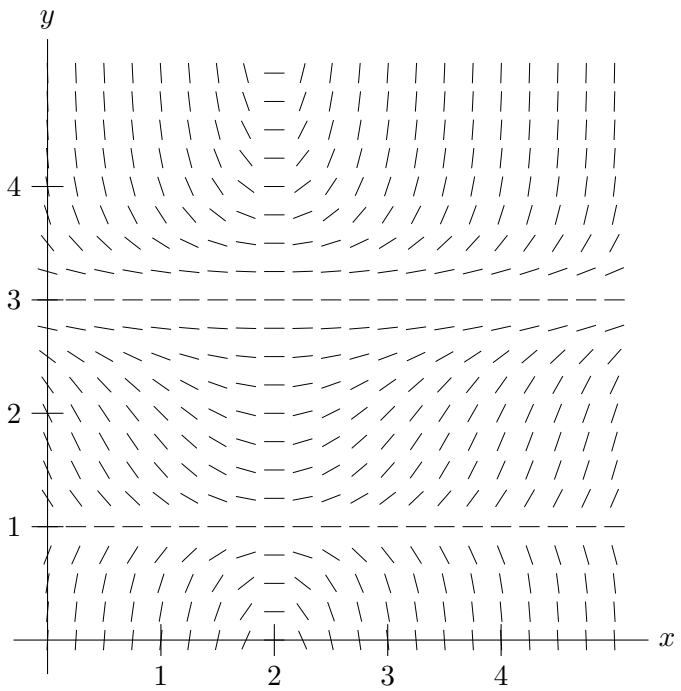
7. [9 points] The graph of a slope field corresponding to a differential equation is shown below.



a. [3 points] On the slope field, carefully sketch a solution curve passing through the point $(2, 2)$ with domain $0 \leq x \leq 5$.

b. [4 points] The slope field pictured above is the slope field for one of the following differential equations. Which one? Circle your answer. You do not need to show your work.

$\frac{dy}{dx} = (x-2)(y-1)(y-3)^2$ $\qquad$ $\frac{dy}{dx} = (x+2)(y+1)(y+3)^2$

$\frac{dy}{dx} = (x-2)(y-1)^2(y-3)^2$ $\qquad$ $\frac{dy}{dx} = (x-2)(y-1)^2(y-3)$

c. [2 points] If we use Euler's method starting at the point $(2, 2)$ and use $\Delta x = 0.1$, would we get an overestimate or an underestimate for the value of $y(2.5)$? Circle your answer. You do not need to show your work.

overestimate $\qquad$ underestimate

