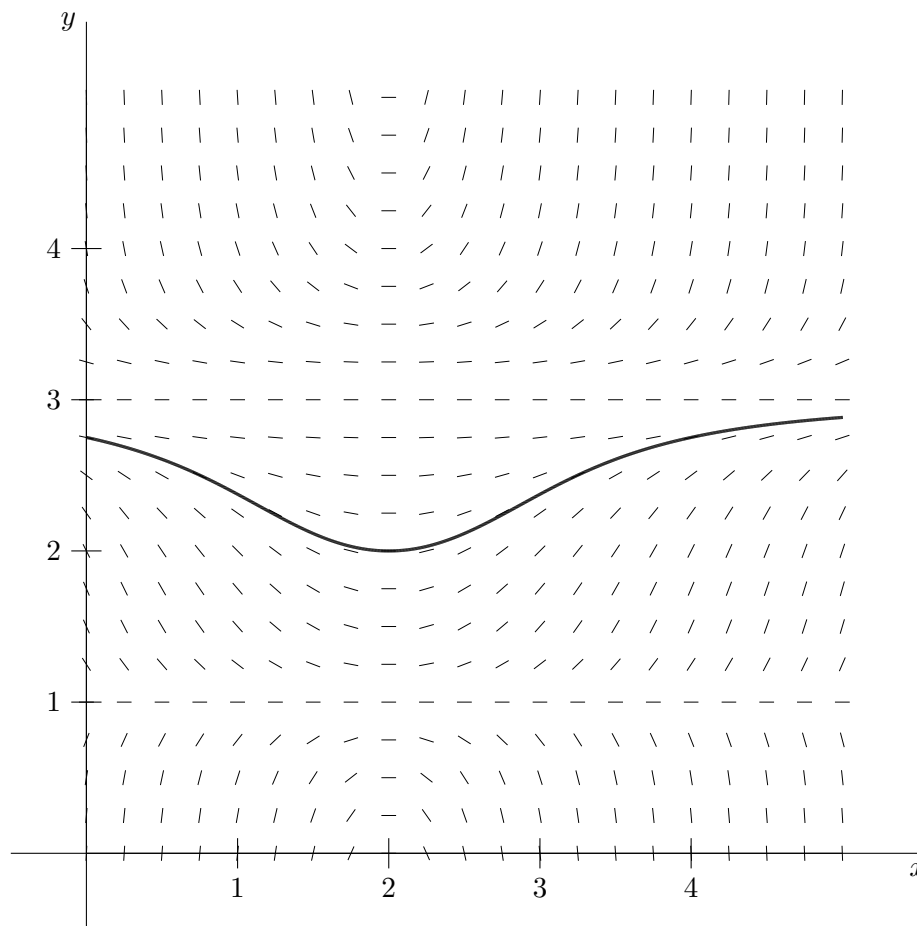


7. [9 points] The graph of a slope field corresponding to a differential equation is shown below.



- 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.

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

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

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

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

- 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

underestimate