

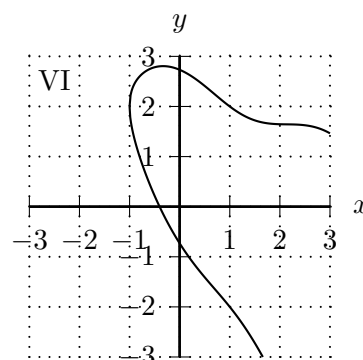
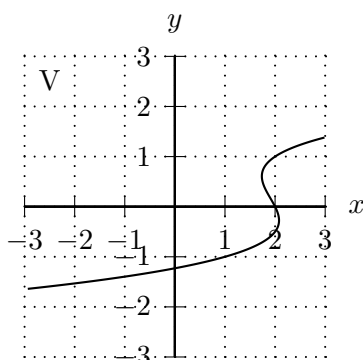
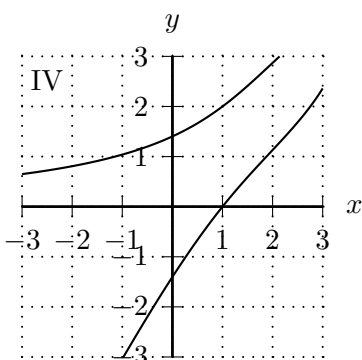
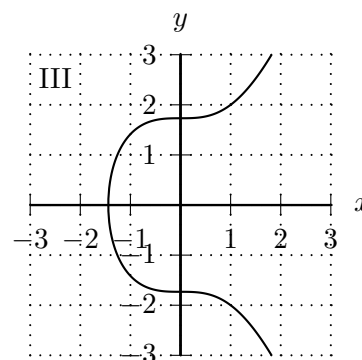
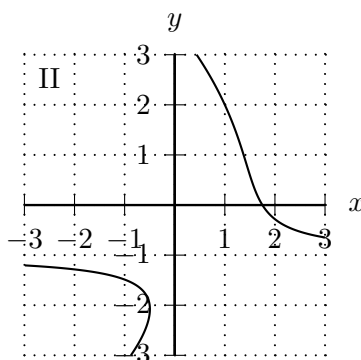
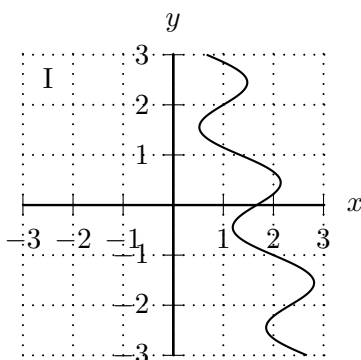
11. [5 points] A curve  $\mathcal{C}$  gives  $y$  as an implicit function of  $x$ . The curve  $\mathcal{C}$  passes through the point  $(1, 2)$  and satisfies

$$\frac{dy}{dx} = \frac{y^2 - 2xy + 4y - 5}{4(y - x)}.$$

- a. [1 point] One of the values below is the slope of the curve  $\mathcal{C}$  at the point  $(1, 2)$ . Circle that one value.

**Answer:** The slope at  $(1, 2)$  is  $\frac{1}{4}$      $\frac{1}{3}$      $\frac{1}{2}$      $\frac{5}{8}$      $\frac{2}{3}$      $\frac{3}{4}$      $\frac{4}{5}$

- b. [4 points] One of the following graphs is the graph of the curve  $\mathcal{C}$ . Which of the graphs I-VI is it? To receive any credit on this question, you must circle your answer next to the word “Answer” below.



Remember: To receive any credit on this question, you must circle your answer next to the word “Answer” below.

**Answer:**    I            II            III            IV            V            VI