

Name:

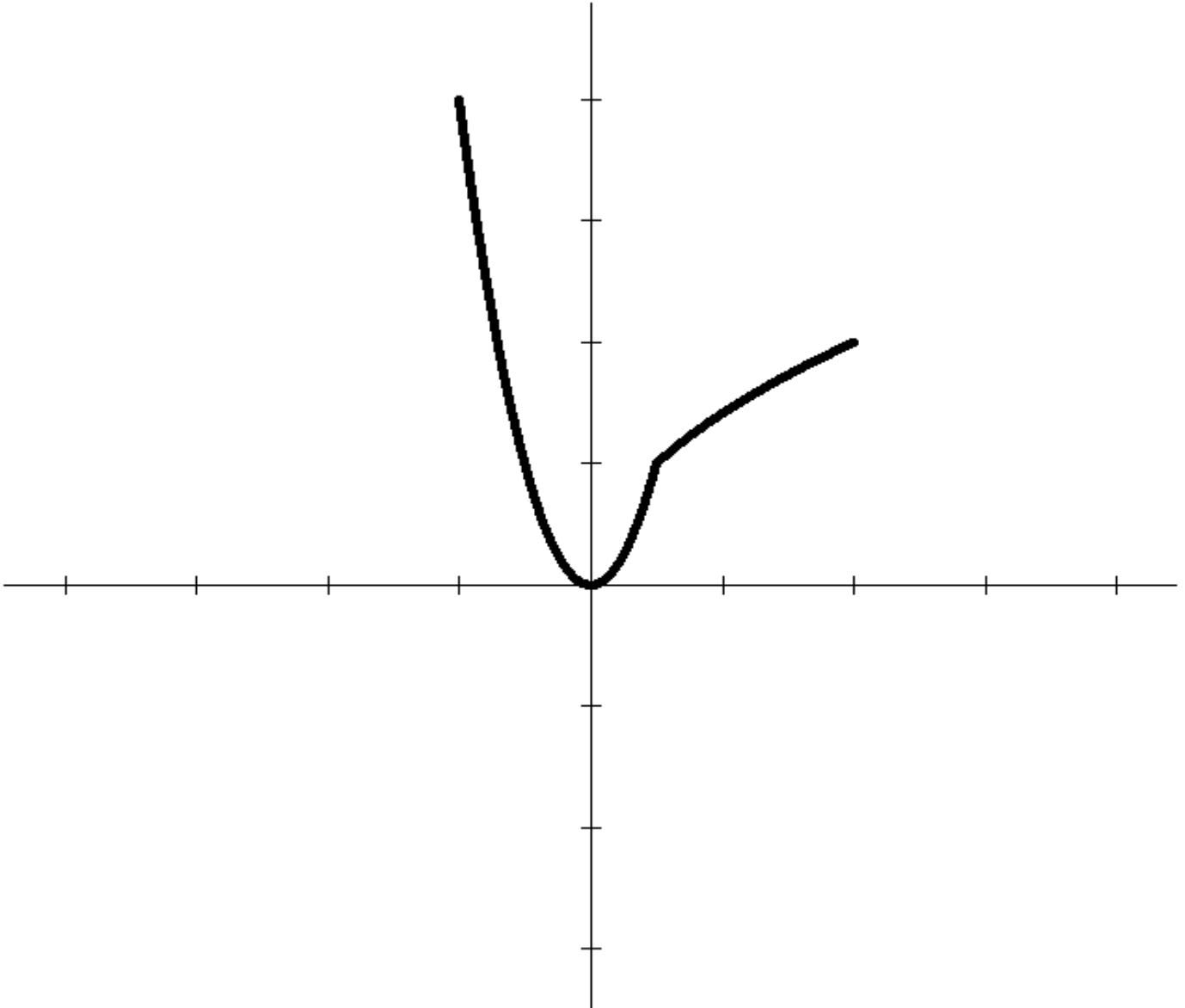
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Section 6

Serial #:

Q1. (5 points)

Given the graph below for the function  $Y$ ; sketch the graph of  $dy/dx$  on the same coordinates plane.



Q2. (5 points)

Can you find a number  $c \in (-3, 3)$  such that  $\frac{x^2 - 3x - 10}{8 + 2x - x^2} = -\frac{7}{6}$ ? Explain in detail.

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Q3. (5 points)

Find the constant  $c$  such that  $f(x) = \begin{cases} c - x^2, & x \leq 2 \\ cx - 1, & x > 2 \end{cases}$  is continuous at  $x = 2$ .

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*With My Best Wishes*