

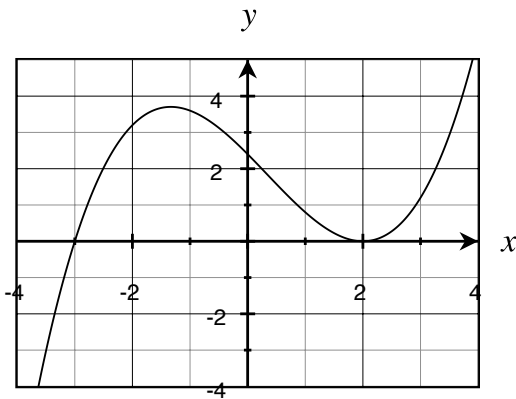
Name: \_\_\_\_\_

Math 105B: Winter 2013

Quiz 2: January 25

Please write your final answer in the space provided. Correct answers accompanied by incorrect or incomplete work will not receive full credit. **Justify all answers.** Good Luck!

1. The graph below is a graph of  $y = g'(x)$ , the derivative of  $g$ . Use the graph to answer the following questions. You will probably have to estimate some answers.



- (a) On what interval(s) is  $g'$  decreasing? Justify your answer.

(1a) \_\_\_\_\_

- (b) On what interval(s) is  $g$  concave up? Justify your answer.

(1b) \_\_\_\_\_

- (c) For what  $x$ -value(s) does  $g$  have a stationary point? Justify your answer.

(1c) \_\_\_\_\_

- (d) For what  $x$ -value(s) does  $g$  have a local extremum? Justify your answer.

(1d) \_\_\_\_\_

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2. Suppose that  $f(1) = 8$  and  $f'(x) \leq 7$  for all  $x$ . What is the smallest that  $f(-2)$  could be?

(2) \_\_\_\_\_