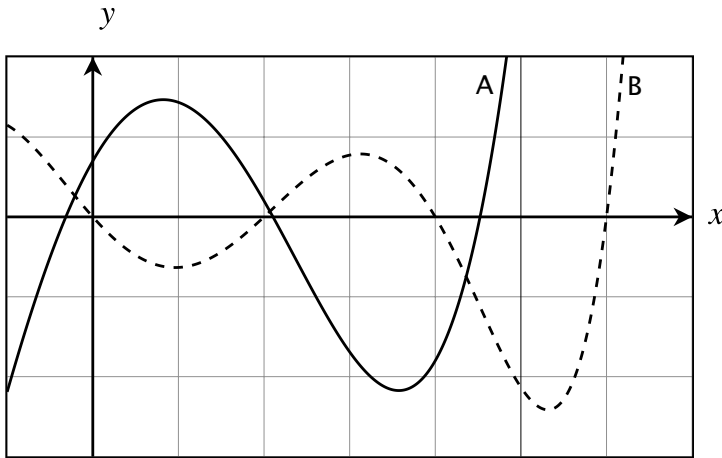


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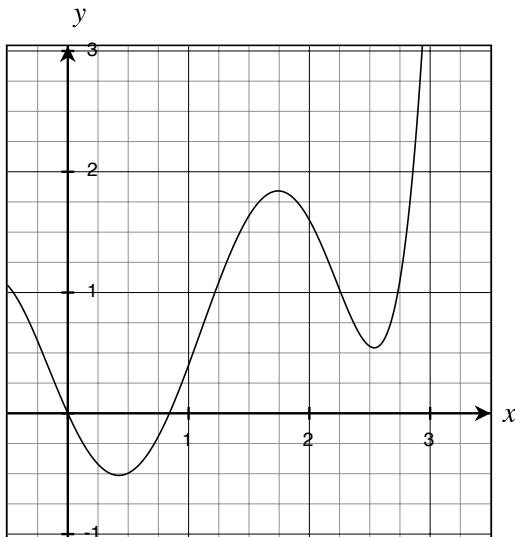
Math 105B: Winter 2013  
Quiz 3: February 1

Correct answers accompanied by incorrect or incomplete work will not receive full credit. **Justify all answers.** Good Luck!

1. The graphs of  $f$  and  $f''$  are shown below. Which is which? Explain your choices.



2.  $g$  is a function such that  $g'$  is the function shown below. Evaluate  $\lim_{h \rightarrow 0} \frac{g(1+h) - g(1)}{h}$ . Explain your answer.



3. Let  $f(x) = \sqrt{\ln x}$ . Find a reasonably good numerical estimate for  $f'(7)$ . Round your answer to three places after the decimal point. (You may NOT use any derivative formulas that you may have learned in a previous calculus class.)