Mth 131
Montgomery
October 6, 2000

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Quiz 4

1. Let $f(x) = \ln x$. Estimate $f'(2)$ by using difference quotients for smaller and smaller intervals around 2. Give your answer accurate to one decimal place.

2. Sketch the graph of $f(x) = (x+1)(x-3)$ and use this graph to sketch the graph of $f'(x)$.

3. An economist is interested in how the price of a certain commodity affects its sales. Suppose that at a price of $\$p$, a quantity q of the quantity is sold. If $q = f(p)$, explain in economic terms the meaning of the statements $f(10) = 240{,}000$ and $f'(10) = -29{,}000$.