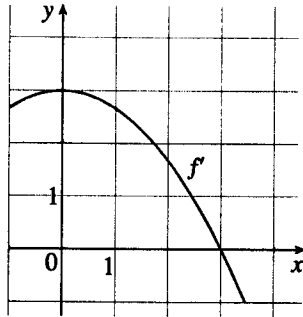


**Group Work 2, Section 3.10**  
**Linear Approximation**

Consider this graph of  $f'(x)$ , the derivative of  $f(x)$ .



1. Suppose that  $f(2) = 4$ . Approximate  $f(1.98)$  and  $f(2.02)$  as best you can. Don't just guess. Show your work.
2. Determine whether your approximations were overestimates or underestimates.
3. Suppose you also know that  $f(3) = 7$ . Can you approximate  $f(2.98)$  and  $f(3.02)$ ? Explain your answer.