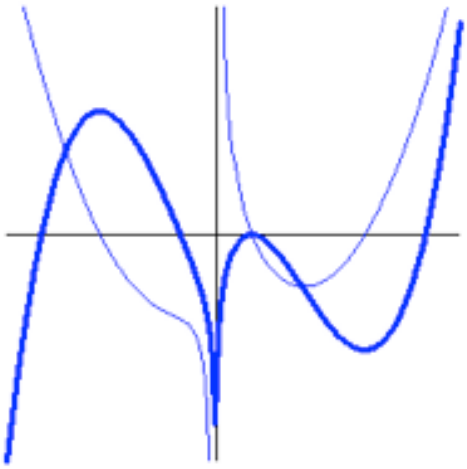
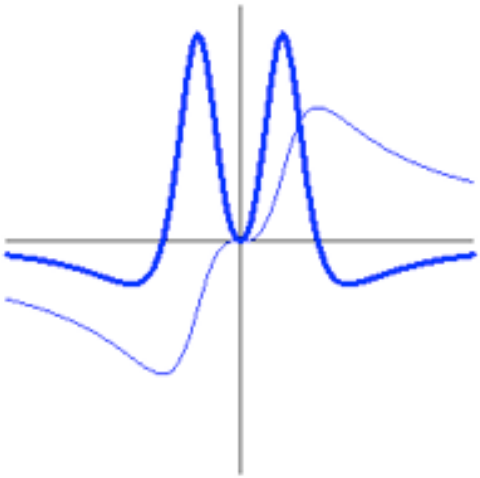
Math 161 Names_____

1. In *a* and *b* below, one curve is f and the other is f'. In each graph, identify f and f'.

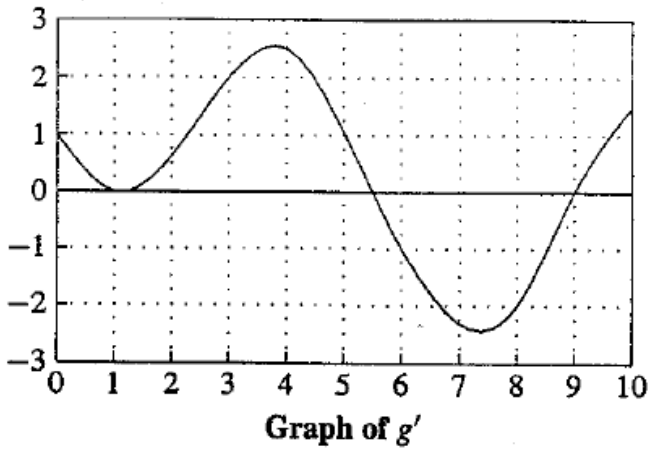
a)



b)



2. **The graph of g',** the derivative of $g(x)$ **is shown below.** Answer the questions below and justify your answer.



Graph of g'

a. Where does $g(x)$ have stationary points?

b. Where does $g(x)$ have a local maximum? A local minimum?

c. The graph of g' has a local maximum at x=3.8 and a local minimum at x=7.4. What does this information tell you about the graph of $g(x)$?

d. Is $g(x)$ concave up or down at x=5? At x=8?

e. Given that $g(0)=0$, sketch the graph of $g(x)$ on axes above.

3. The graph below shows f, f', *and* f''. Which is which? Explain your reasoning.