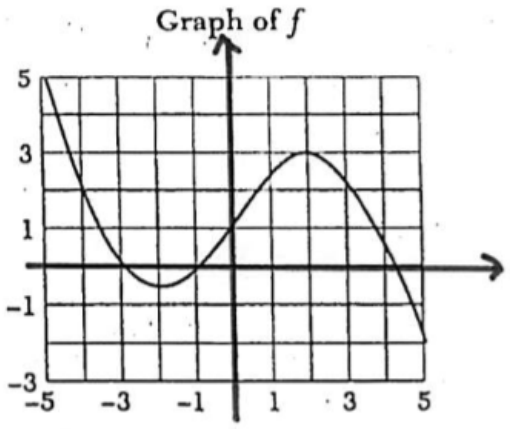
1. f and f' Assume the domain of f is $x \in (-5, 5)$. (Rewrite this symbolic domain description in English.)

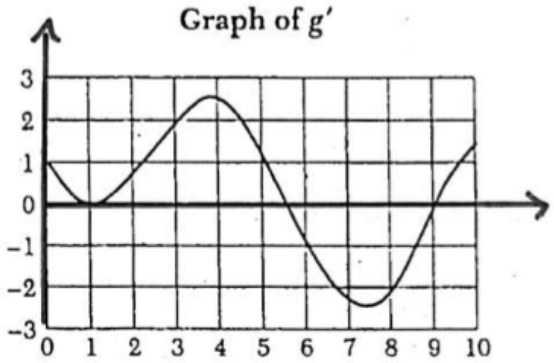
The graph of a function f is shown below.



(a) On which intervals is f' negative? Positive?
(b) On which intervals is f' increasing? Decreasing?
(c) Where does f' achieve its maximum value? Estimate this value of f'.
(d) Where does f' achieve its minimum value? Estimate this value of f'.
(e) Sketch a graph of f'. [NOTE: Your sketch should be consistent with your answers to parts (a)–(d).]

2. g' and g Assume the domain of g is $x \in (0, 10)$.

The graph of the derivative of a function g is shown below. Use the graph of g' to answer the following questions about g. [NOTE: The graph of g is not shown.]



(a) Where does g have stationary points?
(b) Where does g have local maxima? Local minima?
(c) The graph of g' has a local maximum at $x = 3.8$ and a local minimum at $x = 7.4$. What do these facts say about the graph of g?

(d) Is g concave up or concave down at $x = 5$? At $x = 8$? Justify your answers.
(e) Suppose that $g(0) = 0$. Sketch a graph of g.