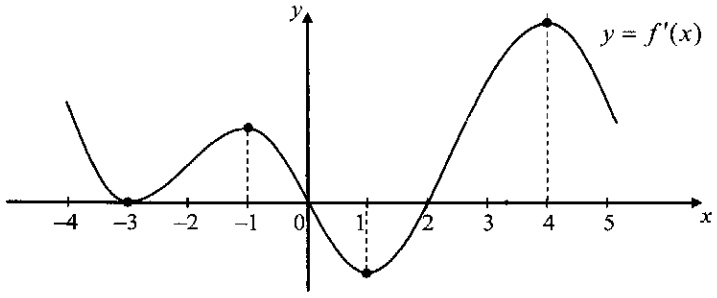
BC CalcLog 3.5

The figure to the right shows the graph of f', the derivative of the function f for $-4 \le x \le 5$. The graph of f' has horizontal tangent lines at $x = -3, -1, 1, \text{and } 4$.



(a) Find all values of x, for $-4 < x < 5$, for which f is decreasing. Justify your answer.

(b) Find all values of x, for $-4 < x < 5$, at which f attains a relative maximum. Justify your answer.

(c) Find all values of x, for $-4 < x < 5$, for which the graph of f is concave up.

(d) Given $f(-4) = -2, f(0) = 5, \text{and } f(5) = 8$, sketch a possible graph of f on the axes to the right.