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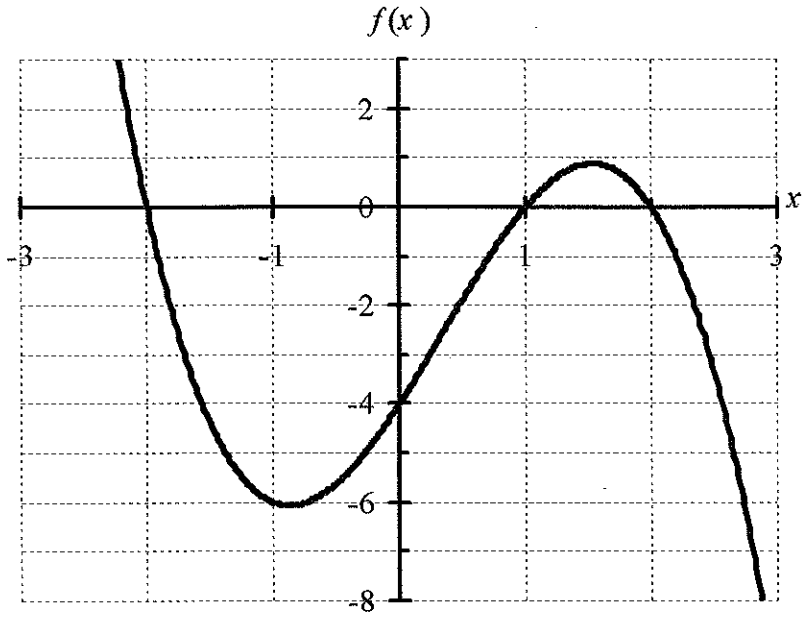
#10 THE DERIVATIVE FUNCTION 2.3

1. Consider the function graphed below.



(a) On this graph, sketch the graph of the derivative function $y = f'(x)$.

(b) The function f is increasing on the interval(s) _____.

The slopes of the tangent lines to f are positive on the interval(s) _____.

If $f'(x) > 0$ on an interval, then f is _____ over that interval.
REMEMBER THAT THE SLOPE OF THE TANGENT LINE TO f AT a IS THE SAME AS $f'(a)$.

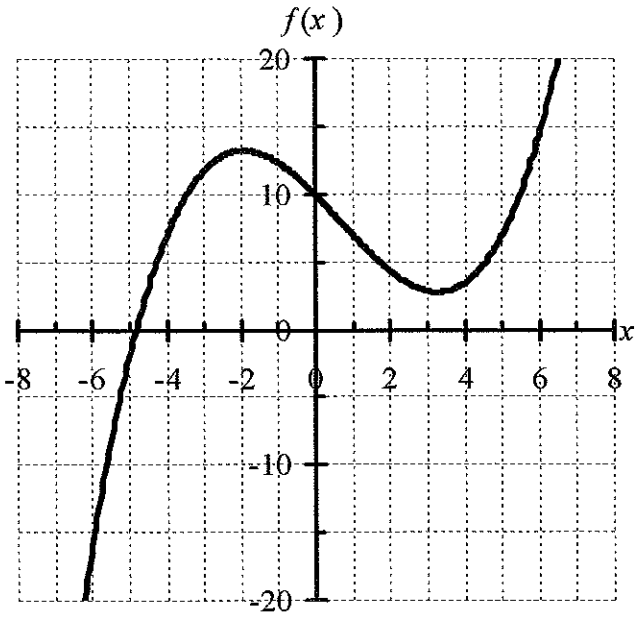
(c) The function f is decreasing on the interval(s) _____.

The slopes of the tangent lines to f are negative on the interval(s) _____.

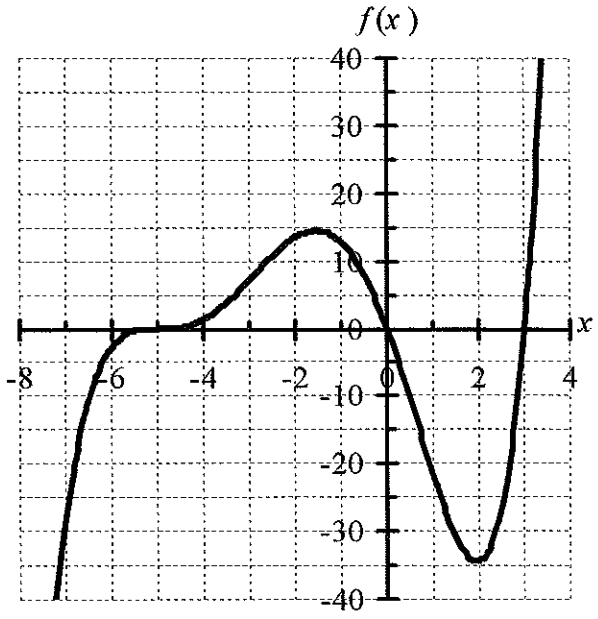
If $f'(x) < 0$ on an interval, then f is _____ over that interval.

2. Sketch the graph of the derivative function for each of these.

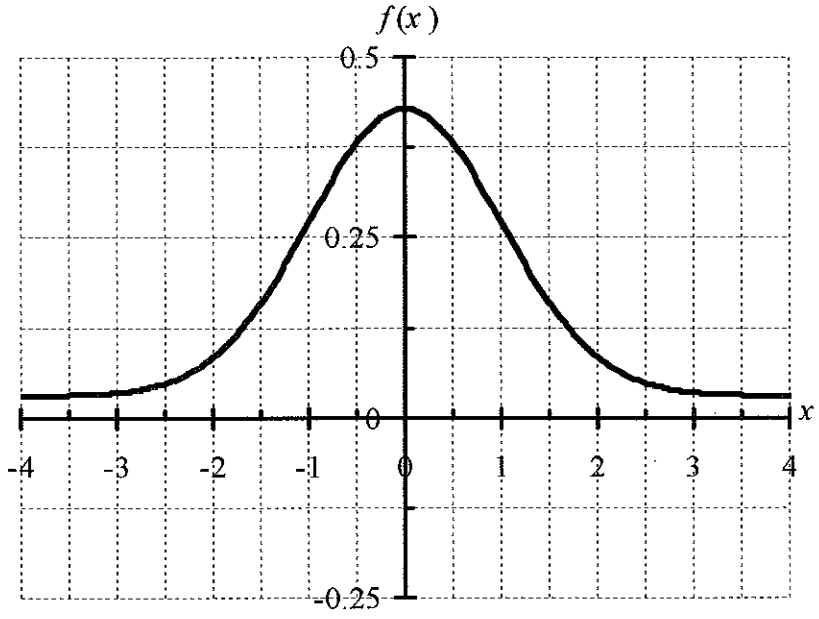
(a)



(b)



(c)



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3. Sketch the graph of the derivative of each of the following functions.