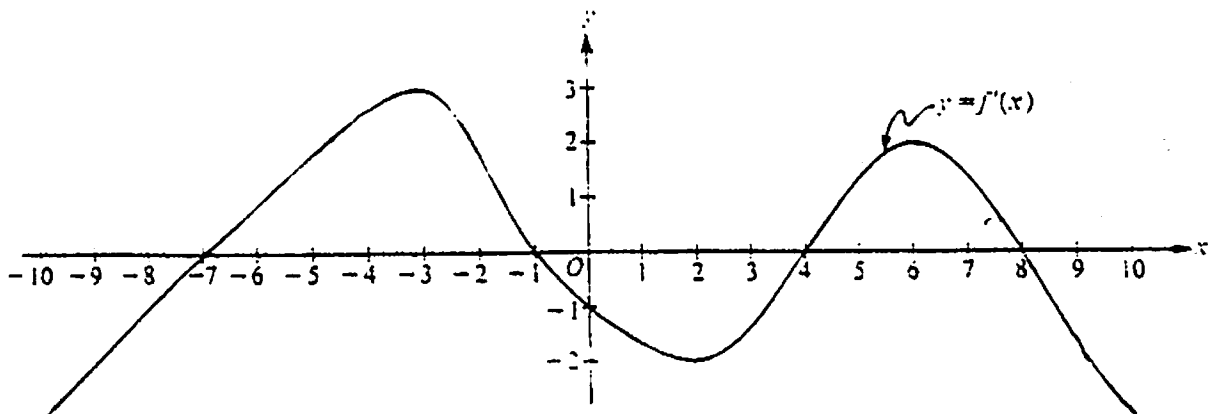


3.

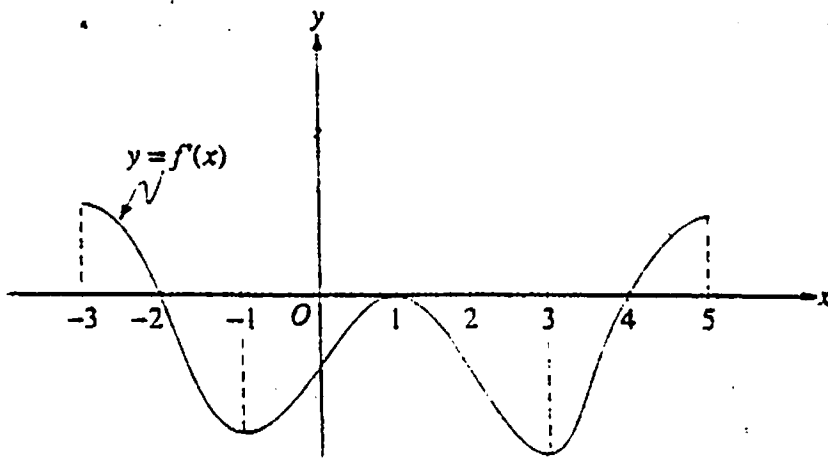


Note: This is the graph of the derivative of f , not the graph of f .

The figure above shows the graph of f' , the derivative of a function f . The domain of f is the set of all real numbers x such that $-10 \leq x \leq 10$.

- For what values of x does the graph of f have a horizontal tangent?
- For what values of x in the interval $(-10, 10)$ does f have a relative maximum? Justify your answer.
- For what values of x is the graph of f concave downward?

4.



Note: This is the graph of the derivative of f , not the graph of f .

The figure above shows the graph of f' , the derivative of a function f . The domain of f is the set of all real numbers x such that $-3 < x < 5$.

- For what values of x does f have a relative maximum? Why?
- For what values of x does f have a relative minimum? Why?
- On what intervals is the graph of f concave upward? Use f' to justify your answer.
- Suppose that $f(1) = 0$. In the xy -plane provided, draw a sketch that shows the general shape of the graph of the function f on the open interval $0 < x < 2$.