GROUP CHAT

$$f(x)=\frac{x^2-4}{x^2-1}$$

a. Use the Quotient Rule to find the derivative of f(x).

b. Find any relative extrema.

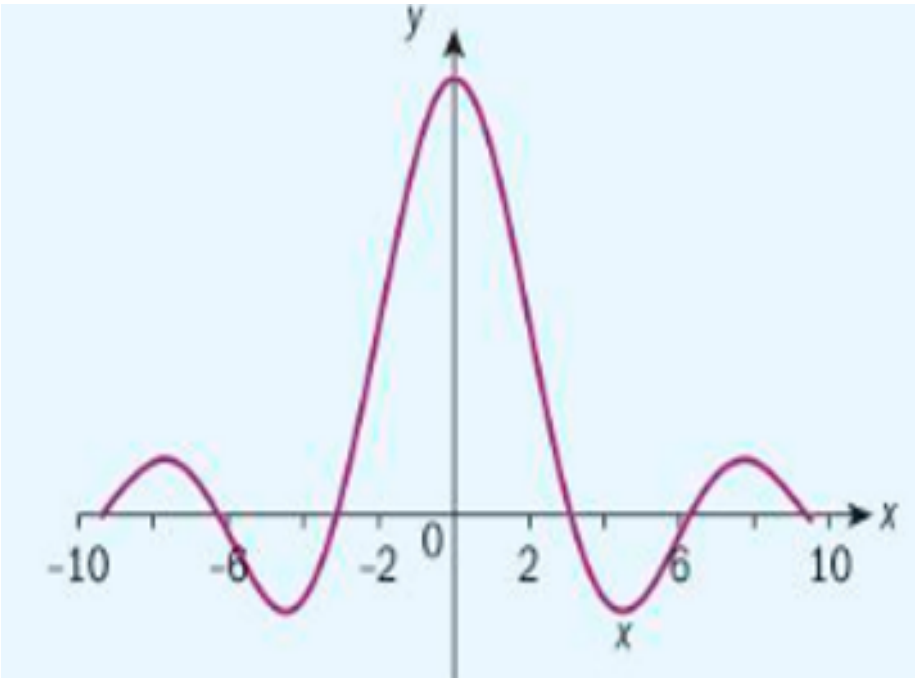
c. Use the First Derivative Test to find the intervals in which the given function is increasing and decreasing.

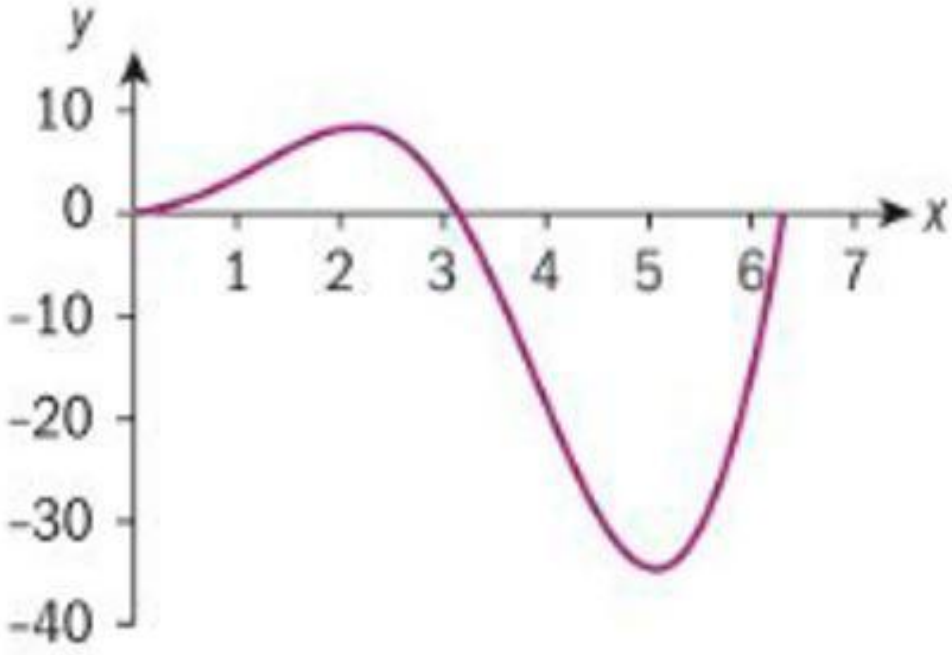
$$f(x)=\frac{u(x)}{v(x)}$$

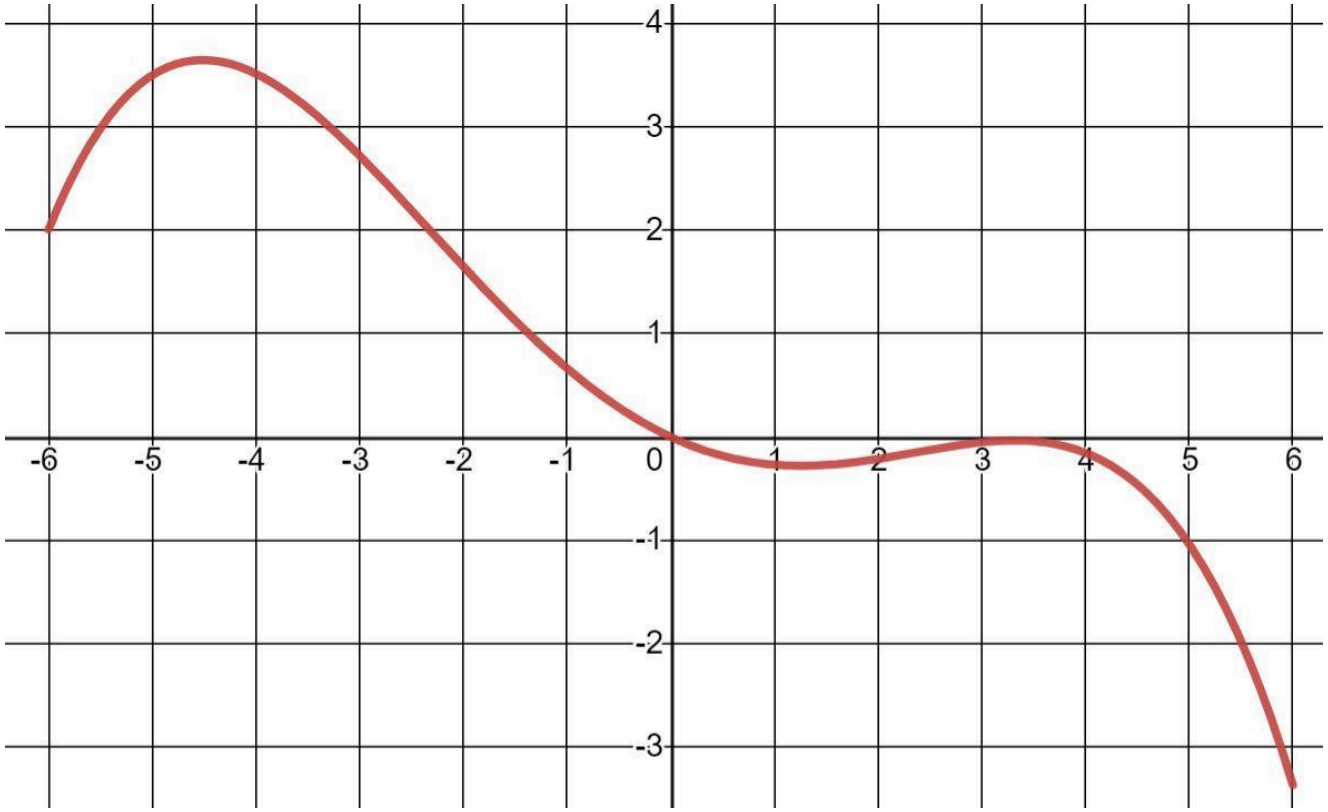
$$f'(x)=\frac{v(x)\cdot u'(x)-u(x)\cdot v'(x)}{[v(x)]^2}$$

Graphing Derivative Functions

For each of the given graphs, add the graphs of f ‘(x) and f ‘’(x).



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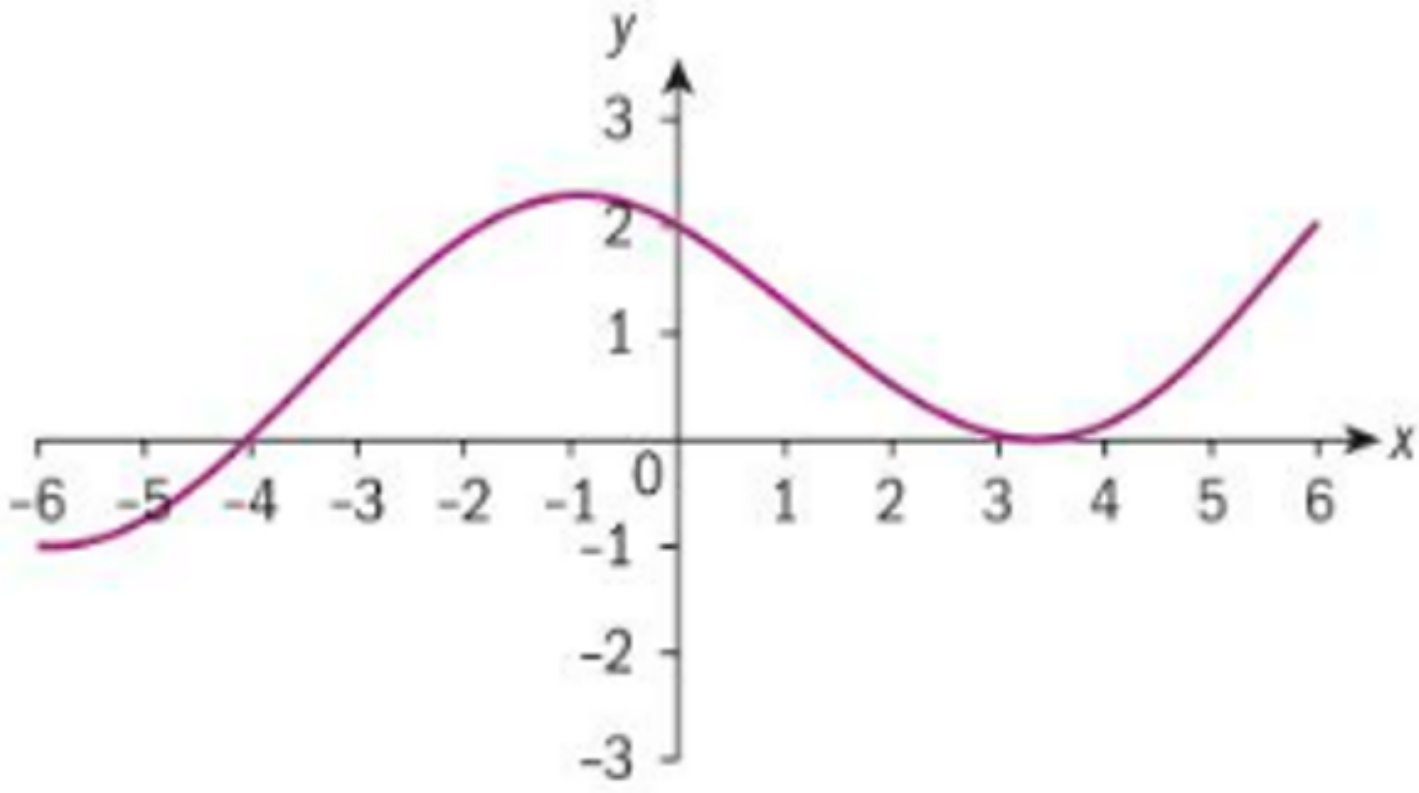
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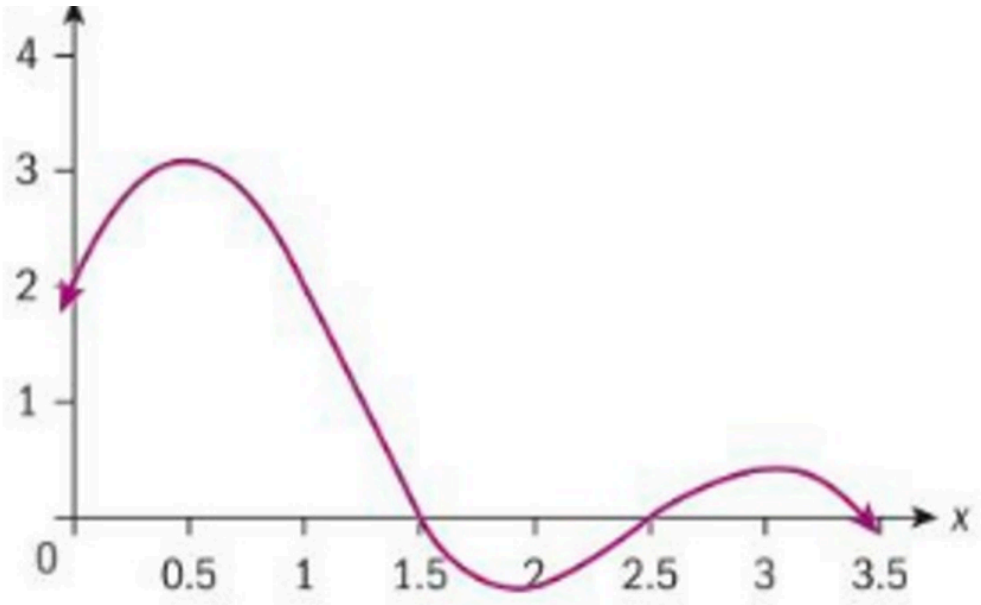
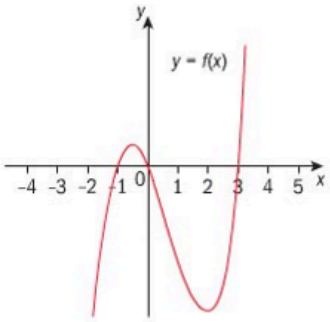
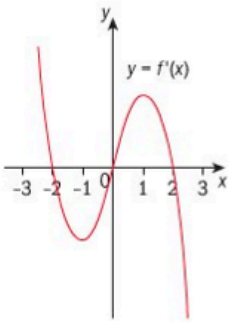


EXAM-STYLE QUESTIONS

1 The graph of $y = f(x)$ is given.
Sketch a graph of $y = f'(x)$ and $y = f''(x)$.



2 The graph of the derivative of f, $y = f'(x)$, is given.
Sketch a graph of $y = f(x)$ and $y = f''(x)$.



3 The graph of the second derivative of f, $y = f''(x)$, is given. Sketch a graph of $y = f(x)$ and $y = f'(x)$.