Math 124 Name _____

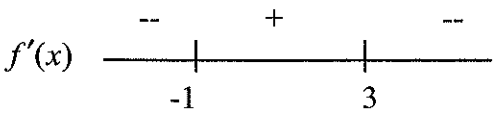
#22 Critical Points, Max/Min, POI, Concavity 4.1

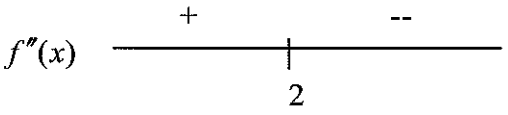
1. Use Calculus to determine 1) critical points, 2) local maximums and minimums, 3) inflection points, and 4) intervals where $f(x)$ is concave up or down. Include an accurate graph that illustrates these features.

A. $f(x)=x^4+2x^3-1$ B. $f(x)=\dfrac{8x-16}{x^2}$ C. $f(x)=2x+3x^{2/3}$

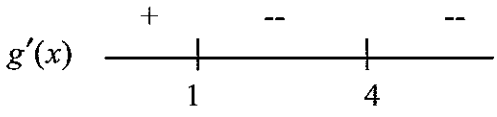
2. In each case, sketch a graph of a continuous function with the given properties.

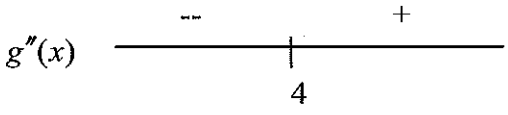
A. $f'(-1)=0$ and $f'(3)=0$





B. $g'(1)=0$ and $g'(4)$ is undefined





C. $h'(-2)=0$ and $h'(2)=0$
$h'(0)$ is undefined